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Body Satisfaction and Self Esteem: A Qualitative Case Study of a Female Collegiate Athlete with Eating Disorders

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BODY SATISFACTION AND SELF ESTEEM: A QUALITATIVE CASE STUDY OF A FEMALE COLLEGIATE ATHLETE WITH EATING DISORDERS

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CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

This is to certify that the Thesis of

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ABSTRACT

Eating disorders are psychiatric disorders that affect individuals' nutritional, psychological, emotional, and interpersonal functioning and are characterized by abnormal and harmful eating patterns, as well as distortions in body size or shape (Petrie & Sherman, 1999). Studies have shown that women, college students in particular, have a high prevalence of eating disorders (American Psychiatric Association, 1994; Hausenblas & McNally, 2004; Mintz & Betz, 1988). In the college community, a population of focus is female athletes. The prevalence of eating disorders in this population has been examined thoroughly (Burckes-Miller & Black, 1988a; Smolak, Murnen, & Ruble, 2000). A meta-analysis by Hausenblas and Carron (1999) found female athletes to report more anorexic and bulimic symptoms than non-athletes, especially within lean sports (e.g., figure skating and gymnastics). Research has also shown that sociocultural factors (i.e., family, teammates, coaches, and media) can impact female athletes with eating disorders (Sherman & Thompson, 2001). However, there has been limited research investigating the personality factors (i.e., body satisfaction and self-esteem) of female athletes (Pritchard, Milligan, Elgin, Rush, & Shea, 2007).

The purpose of this study was to identify the impact of eating disorder behaviors on a female collegiate athlete's body satisfaction and self-esteem. One female student-athlete was interviewed twice, using a semi-structured interview format, to identify the influence of her eating disorder behaviors on her body satisfaction and self-esteem. The interviews were analyzed and higher-order themes were identified. Six themes emerged: 1) Eating behaviors were a way to control her life; 2) Eating behaviors lead to a negative self-perception; 3) Conflict with family developed due to eating behaviors; 4) Eating

behaviors caused for poor performance in sport; 5) Eating behaviors generated self-isolation causing self-loathing and internal discord; and 6) Self-perceived coping strategies enhanced her lifestyle. Each theme was discussed in relation to the existing literature.

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DEDICATION

I dedicate this thesis project to all individuals who have lived or who are currently living with an eating disorder. I have learned so much about this community of individuals and what one has to endure in order to overcome an eating disorder. Hopefully, this research will help to create greater awareness among athletic communities across this country.

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Chapter 1

INTRODUCTION

Eating disorders have become an important issue in Western society with which many women and men struggle. Eating disorders are psychiatric disorders that affect nutritional, psychological, emotional, and interpersonal functioning and are characterized by abnormal and harmful eating patterns, as well as distortions in body size or shape (Petrie & Sherman, 1999). Many studies indicate that eating disorders are most prevalent in females (Cooper & Fairburn, 1983; Hausenblas & McNally, 2004; Mintz & Betz, 1988; Muth & Cash, 1997). Specifically, the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) reported that 90% of eating disorder patients were women with a mean age between 17 and 18 (American Psychiatric Association, 1994). With that, college women have become the primary focus when evaluating eating disorders. In fact, 15% to 62% of college women have reported disturbed eating patterns, such as purging and taking appetite suppressants (Mintz & Betz, 1988).

There are specific criteria outlining a clinical diagnosis of an eating disorder. This criterion is found in the DSM-IV (American Psychiatric Association, 1994) and contains information about three primary eating disorders; anorexia nervosa (AN), bulimia nervosa (BN), and eating disorders not otherwise specified (ED-NOS).

The risk factors associated with these disorders often cause difficulty in creating or implementing a successful prevention program (Mussel, Binford, & Fulkerson, 2000). There are many groups of women that are at higher risk for eating disorders because of a focus on leanness (Taub & Blinde, 1992). Some of these groups include ballet dancers (Brooks-Gunn, Burrow, & Warren, 1988), models (Garner & Garfinkel, 1980), and

athletes (Brooks-Gunn et al., 1988). Eating disorder patients can also be strongly influenced by sociocultural factors (e.g., friends/family relationships and media pressure) to stay thin and obtain the ideal body image (Cusumano & Thompson, 1997). Personality factors such as low self-esteem, body dissatisfaction, drive for thinness, and perfectionism, might also add to the development of eating disorders (Hildebrandt, 2005).

Several studies have been conducted on the prevalence of eating disorders in athletes (Burckes-Miller & Black, 1988a; Petrie, 1993; Smolak, Murnen, & Ruble, 2000; Sundgot-Borgen, 1994a; Taub & Blinde, 1992). However, it is still not known whether athletes are more susceptible to eating disorders versus non-athletes due to varied research findings (Ashley, Smith, Robinson, & Richardson, 1996; Reinking & Alexander, 2005). Even so, the athletic population has been associated with many unhealthy behaviors that often result in various eating disorders, suggesting that athletes are at risk (Thompson & Sherman, 1999a). Among athletes, it seems that ED-NOS or subclinical eating disorders are most prevalent (Beals, 2000). Anorexia athletica (Sundgot-Borgen, 1993) and the female athlete triad (West, 1998) are often precursors to the development of clinical eating disorders in athletes (Hildebrandt, 2005).

One reason that many athletes continue suffering from eating disorders is because they often receive encouragement to keep up these unhealthy actions, rather than get help. Many coaches find it difficult to differentiate between a good athlete (i.e., well trained and lean) and an athlete with characteristics associated with an eating disorder (Krane, Waldron, Stiles-Shipley, & Michalenok, 2001). Thompson and Sherman (1999b) concluded that the athlete who "works excessively, denies pain and injury, is selflessly committed to the team, complies completely with coaching instructions, and accepts

nothing less than perfection, not to mention is willing to lose weight to be better, is exactly what many coaches are looking for in an athlete" (p. 186).

The prevalence of eating disorders in female athletes has also been examined (Johnson, Powers, & Dick, 1999; Rosen, McKeag, Hough, & Curley, 1986). Few studies have been completed with male athletes, and therefore most of the statistics provided pertain to female athletes (Smolak et al., 2000). For example, results indicated that 32% of women, among a sample of 182 female collegiate athletes, were found to display pathogenic weight-control behaviors (i.e., eating disorder behaviors) (Rosen, McKeag, Hough, & Curley, 1986). In a meta-analysis completed by Hausenblas and Carron (1999), female athletes reported more anorexic and bulimic symptoms than non-athletes, especially within aesthetic sports (e.g., figure skating and gymnastics).

Various sociocultural factors (e.g., coaches, family, friends, and media) can also contribute to eating disorders in female athletes (Cusumano & Thompson, 1997; Harrison & Cantor, 1997; Sherman & Thompson, 2001), but less research exists concerning personality factors of the athlete. However, the development of eating disorders can be strongly influenced by body dissatisfaction and low self-esteem (Pritchard et al., 2007).

High self-esteem is important for athletes, because it often allows for positive attitudes and is associated with greater sport performance. In contrast, low-self esteem is a factor for greater disordered eating behavior (Engel et al., 2003). Individuals that have low self-esteem and are placed in a culture that is focused on physical perfection, often reflect feelings of worthlessness in their self-perception (Furnham, Badmin, & Sneade, 2002). In fact, a decrease in self-esteem can contribute to poor body image and bulimic symptoms (Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999). Feingold (1992)

found that a person who fits the perfect physical stereotype will experience psychological benefits in their self-esteem and mental health. However, low self-esteem has a negative effect on eating disorder behaviors in adolescent girls (Lindeman, 1994).

Body dissatisfaction is a major factor in the development of eating disorders (Thompson, Coovert, & Stormer, 1999). Women often obtain this dissatisfaction through their attempt to have the "ideal body". Women often worry about how much fat they have on their bodies and what their shape looks like (Striegel-Moore, McAvay, & Rodin, 1986a). Specific to athletes, certain stereotypes can lead to the risk of body dissatisfaction (Krane, et al, 2001). Picard (1999) found that many athletes in lean sports (e.g., distance running, gymnastics) had body dissatisfaction with their overall shape and a fear of getting fat. Overall, research has found that negative body image is linked to disordered eating symptoms in athletes (Berry & Howe, 2000). Krane et al. (2001) stated "performance-related body image concerns (i.e., the need to be more muscular and less fat) and cultural pressures to present the ideal body (i.e., toned but not too muscular) both may contribute to unhealthy mental states and problematic eating and exercise behaviors in female athletes" (p. 47).

Body dissatisfaction and self-esteem have been found in numerous studies to be correlated (Marten, DiBartolo, & Shaffer, 2004; Thompson, 1996; Wilkins, Boland, & Albinson, 1991). However, few studies have examined athlete's attitudes and experiences of body satisfaction and self-esteem once they have been treated for an eating disorder. By exploring body satisfaction and self-esteem of female student-athletes with eating disorders, the relationship between body satisfaction and self-esteem can be revealed and better understood. The current study examined the impact of eating disorder behaviors on

both body satisfaction and self-esteem. This research may help contribute to current and future treatment programs for athletes with eating disorders.

Purpose Statement

The purpose of this study was to identify the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem.

Research Question

What is the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem?

Significance of the Study

By conducting a semi-structured interview to explore the factors that are potentially impacted by eating disorder behaviors in a female athlete, the issues of body satisfaction and self-esteem may be elucidated. Few studies have used qualitative research to study the factors impacted by eating disorder behaviors, and therefore many studies have relied on self-report data with questionable results (Beals & Manore, 1994). Therefore, by exploring body satisfaction and self-esteem of a female student-athlete with eating disorders, the relationship between body satisfaction and self-esteem was examined. Results may help educate student-athletes, as well as coaches, parents, and peers, as to better ways to help those with eating disorders. This knowledge may also allow for better prevention strategies within the athletic community. The data gathered in this study is especially pertinent for female student-athletes at a collegiate level.

Delimitations

The delimitations for this study include:

1. A small sample size (n = 1) receiving treatment for clinical eating disorders.

2. The primary investigator created the semi-structured interview guides specifically for this study.
3. A Division III female student-athlete was recruited and volunteered as the subject.

Limitations

The limitations for this study include:

1. Results may only be generalized to female student-athletes who have been clinically diagnosed with an eating disorder.
2. Results are limited to those experiences and issues elicited via a semi-structured interview, and follow-up interview in a case study format.
3. Results of this study may only be generalized to female student-athletes at the NCAA Division III level.

Assumptions

It is assumed that the female student-athlete interviewed was answering questions in a truthful and reliable manner.

Definition of Terms

1. Anorexia Nervosa (AN) – an eating disorder characterized by a patient refusing to maintain at least 85% of their expected body weight, normal for their age and height; an intense fear of gaining weight or becoming fat; a disturbance in ones self-evaluation of their body weight or shape; in postmenarchal females amenorrhea is present (American Psychiatric Association, 2000).
2. Bulimia Nervosa (BN) – an eating disorder characterized by a patient with recurrent episodes of binge eating; recurrent inappropriate compensatory behavior to prevent

weight gain; binging and inappropriate compensatory behavior occurs at least twice a week for three months; self-evaluation is extremely influenced by body shape/weight (American Psychiatric Association, 2000).

3. Eating Disorders Not Otherwise Specified (ED-NOS) – an eating disorder that does not meet the criteria for anorexia nervosa or bulimia nervosa but still portrays some of the same symptoms of those eating disorders (American Psychiatric Association, 2000).
4. Subclinical Eating Disorders – a phrase used by researchers to describe patients who have significant eating and body weight issues but do not meet all of the *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM-IV) criteria for anorexia nervosa or bulimia nervosa (Beals, 2000).
5. Anorexia Athletica (AA) – a subclinical eating disorder specific to the athletic experience characterized by weight loss brought about by severe restrictions in what one eats, and intense fears with gaining weight and becoming fat. Also menstrual irregularities and binge eating can be present (Sundgot-Borgen, 1993).
6. Female Athlete Triad (FAT) – a combination of three factors, specific to athletes, which include extreme methods of weight control (e.g., binge-eating and purging, as well as restricting the amount of food intake); amenorrhea and osteoporosis are also both present with the disordered eating (Otis, Drinkwater, Johnson, Loucks, & Wilmore, 1997).
7. Pathogenic Weight Control Behaviors – unhealthy weight loss behaviors (self-induced vomiting, misuse of laxatives, enemas, fasting, excessive exercise, or any

other medications) which are likely to be injurious if practiced over time (i.e., eating disorder behaviors) (Mitchell, Seim, Colon, & Pomeroy, 1987).

8. Body Satisfaction – how one thinks and feels about their physical appearance based on self-observation and the reactions of others (Furnham, Badmin, & Sneade, 2002).
9. Self-Esteem – a favorable or unfavorable attitude toward the self; one's belief in the self (Rosenberg, 1965).
10. Semi-Structured Interview – an individual interview that consists of open-ended questions that are established from general topics of investigation to create themes. It is designed to elicit the interviewee's ideas and opinions on the topic of interest (Aira, Kauhanen, Larivaara, & Rautio, 2003).
11. Qualitative Research – a nonmathematical process of interpretation in order to discover concepts and relationships in raw data and then organize them into theoretical explanatory schemes. Research pertains to person's lives, lived experiences, emotions, thoughts, and feelings as well as cultural phenomena and social movements (Strauss & Corbin, 1990).

Chapter 2

REVIEW OF LITERATURE

Eating Disorders

Among members of society there is great emphasis placed on body image and thinness, causing some people to use extreme measures to reshape their bodies. Eating disorders are a result of abnormal and harmful eating patterns that are used as an attempt to lose weight or decrease body weight to lower-than-normal (Otis et al., 1997). Disordered eating usually occurs during the adolescent period or late adulthood, and can be influenced greatly by the occurrence of puberty and rapid body changes during those times (Byrne & McLean, 2001). Eating disorders are classified and diagnosed using the DSM-IV (American Psychiatric Association, 1994). The three primary disorders found in the DSM-IV are Anorexia Nervosa (AN), Bulimia Nervosa (BN), and Eating Disorders Not Otherwise Specified (ED-NOS).

Anorexia Nervosa (AN) is characterized by self-induced starvation, and many psychological factors accompany this disorder. Anorexics generally have an intense fear of becoming obese, poor self-esteem and body dissatisfaction, and a distorted body image (Campbell, 1986). This disorder is believed to result from a variety of factors, but unhealthy family dynamics, personality characteristics of the individual, and societal pressures play a major role in the development of anorexia (Thompson, 1987). The DSM-IV lists specific criteria for anorexia nervosa that allow for someone to be properly diagnosed in a clinical setting:

1) There is a refusal to maintain a body weight that correlates with the normal weight for age and height. Even if one is underweight, there is an intense fear of becoming fat or gaining weight. There is a disturbed experience with one's body

weight or shape. When dealing with females that have already experienced their period, there is an absence of at least three consecutive menstrual cycles, which is referred to as amenorrhea. Finally, there are two types of anorexia nervosa – restricting and binge-eating/purging (American Psychiatric Association, 2000, p.583).

Bulimia Nervosa (BN) is very similar to anorexia nervosa in many respects. It is also associated with familial, psychological, and sociocultural pressures. In addition to these factors, bulimia can be a result of biological factors, such as predisposition to depression. Bulimics typically use binging and purging to control their emotions, but only for temporary relief (Thompson, 1987). The DSM-IV states criteria for bulimia nervosa that establishes whether or not someone can be clinically diagnosed:

1) There are recurrent episodes of binge eating – eating an amount of food larger than most people can consume in a normal period of time, yet in a short period of time. Also, binge eating refers to a lack of control over eating during the binge episodes. There is also recurrent inappropriate compensatory behavior in order to not gain weight. These eating disorder behaviors can be self-induced vomiting, misuse of laxatives, enemas, fasting, excessive exercise, or any other medications. These episodes and behaviors occur at least twice a week for three months. Body shape and weight influences how one evaluates themselves. In addition, this binging and purging does not only occur during episodes of anorexia nervosa. Finally, there are two types of bulimia nervosa – purging type and non-purging type (American Psychiatric Association, 2000, p.588).

Eating Disorders Not Otherwise Specified (ED-NOS) are eating disorders that do not meet the criteria for either anorexia nervosa or bulimia nervosa (Beals & Manore, 1994). This criterion is very common among adolescents with body image and eating problems (Levine & Smolak, 2006). The DSM-IV states specific example criteria that clarifies the difference between ED-NOS and AN/ BN:

1) For females, they may meet all of the criteria for anorexia nervosa; however the individual is still experiencing regular menstrual cycles. Also, the individual's current weight is in normal range, despite significant weight loss, so they would not be fitting under all of the criteria for anorexia nervosa. With bulimia nervosa, all of the criteria are met except the binge episodes and compensatory behaviors occur less than twice a week or for less than three months. Also, there is regular compensatory behavior, by an individual who falls under the normal weight category, after eating very small amounts of food. Finally, individuals will repeatedly chew and spit out, but never swallow, large amounts of food (American Psychiatric Association, 2000, p.594).

Subclinical eating disorders are very similar to ED-NOS; however, they are used by researchers to describe when someone doesn't meet all the criteria for anorexia nervosa or bulimia nervosa in the DSM-IV due to their symptoms being insufficient in number or frequency, and therefore cannot be classified as a clinical eating disorder (Beals, 2000). However, the person still experiences body and eating-problems that are very severe to their health (Beals, 2000). Dancyger and Garfinkel (1995) found that subclinical eating disorders are more common than clinical eating disorders among female adolescents. Specific to athletes, there is one common type of subclinical eating disorder. This is

called anorexia athletica, which could also be referred to as the fear of obesity, and is a subclinical alternative to anorexia nervosa (Beals, 2000). Sundgot-Borgen (1993) described anorexia athletica with an athlete who is underweight, and still has a fear of gaining weight or becoming fat. Also, this low weight is brought on by excessive exercise, energy restriction, self-induced vomiting, and the use of laxatives. Similar to anorexia nervosa and bulimia nervosa, anorexia athletica can also be described by a disturbance in body image, binge-eating, or menstrual dysfunction (Sundgot-Borgen, 1993). According to recent research, approximately 8% of elite female athletes are suffering from this disorder (Sundgot-Borgen, 1994a).

There is also a common consequence that occurs in female athletes with eating disorders. This is called Female Athlete Triad (FAT). This transpires when disordered eating, amenorrhea, and osteoporosis occur at the same time (Petrie & Rogers, 2001). Disordered eating is the first component of FAT and is described as extreme or harmful methods of weight control, such as binging and purging or restricted food intake (Otis et al., 1997). Too much exercise can cause amenorrhea, which is the absence of 3 to 6 consecutive menstrual cycles (Henriksson, Schnell, & Hirschberg, 2000). Athletes that are at the greatest risk for amenorrhea usually begin training before their first menstrual bleeding and they have an extremely intense training regimen. Also, they have a low body weight and consume very few calories (Snow-Harter, 1994). Amenorrhea has a consequence that affects the bones in a female athlete. When menstrual dysfunction occurs in females, they are at greater risk for osteoporosis (West, 1998). Osteoporosis is the third component of the female athlete triad, and refers to the inadequate bone formation and premature bone loss in a female. This results in an increased risk of a

fracture and low bone mass (West, 1998). Even though osteoporosis is prevalent among older women, it occurs in young female athletes as well. It has been found that young athletes can experience bone mass loss between 2 and 6% a year (West, 1998).

Eating Disorder Prevalence in Females

In Western society, it has become the norm for young women to diet, but not for young men. Dieting and exercise have been found to be the primary strategies for altering the female body (Garner, Rockert, Olmstead, Johnson, & Coscina, 1985). Cooper and Fairburn (1983) found that women are more likely than men to diet, weigh themselves frequently, or describe their bodies as fat. Also, they found that women are more dissatisfied with their figure than men. These findings have influenced the research on eating disorders in females. Among college women, it was found that between 15% and 62% experienced very harsh methods of weight loss, which included self-induced vomiting, use of laxatives and diet pills, along with excessive exercise (Mintz & Betz, 1988). Even though men have been found to take part in eating disorder behaviors, there is a 9 (female) to 1 (male) ratio that clearly defines gender differences among eating disorders (American Psychiatric Association, 1994). In a study of high school and college students, it was found that women reported higher body dissatisfaction and occurrence of eating disorders than did men (Hausenblas & McNally, 2004). Compared to men, women have more negative evaluations of their bodies, more frequent body-image dysphoria, as well as much stronger investments in how they look (Muth & Cash, 1997). Fairburn and Beglin (1990) also found that women and girls are 10 times more likely to develop an eating disorder than men and boys. This prevalence in women also is due to the fact that

little research has been done on the etiology of eating disorders in boys and men, and further research is needed (Carlat & Camargo, 1991).

Eating Disorders in Athletes

Almost all athletes at some point in their career are concerned about controlling their body weight (Smith, 1984). The athletic community at the collegiate levels has begun to emerge as a population that is known to develop eating disorders (Burckes-Miller & Black, 1988a). Many empirical studies have revealed that there is a disturbing incidence of eating disorder behaviors among competitive athletes (Burckes-Miller & Black, 1988a; Petrie, 1993; Sundgot-Borgen, 1994a; Taub & Blinde, 1992). Burckes-Miller and Black (1988a) found that approximately 1 in 5 college athletes could be classified as bulimic. Overall, these studies on the prevalence of eating disorders have reported between 1% and 40% of female athletes to experience some form of anorexia nervosa and/or bulimia nervosa. These estimates vary greatly depending on the athletic population studied and the assessment tools used (Sundgot-Borgen, 1994a). The National Collegiate Athletic Association (NCAA) sponsored a study that surveyed both men and women athletes from 11 Division I schools, all playing different sports. It was found that over 13% of athletes reported clinical eating disorder symptoms, showing that subclinical disorders are very common among the athletic population (Johnson, Powers, & Dick, 1999). Also from this study it was concluded that female athletes, specifically, were at great risk for developing thoughts, behaviors, and attitudes associated with eating disorders (Johnson et al., 1999). Even if clinical eating disorders are not more prevalent in athletic environments, eating disorder behaviors that lead to these disorders are. Rosen

et al. (1986) found that 32% of female college athletes practiced at least one eating disorder behavior, such as self-induced vomiting or use of laxatives and diet pills.

The comparison of athletes to non-athletes is a major area of interest when studying eating disorders in females. Research has produced mixed results across universities and colleges in the United States (Kirk, Singh, & Getz, 2001). There have been many findings in which female athletes reported more anorexic and bulimic symptoms than non-athletes (Hausenblas & Carron, 1999) and the overall prevalence of eating disorders remains higher in athletes compared to non-athletes (Beals & Manore, 1994; Thompson & Sherman, 1999a). Brownell and Rodin (1992) conducted a review of 23 studies on eating problems among athletes and concluded that athletes portrayed more problems with dieting, eating behaviors, and body image than did non-athletes. Also, in a meta-analysis conducted by Smolak et al. (2000), 34 studies were analyzed and conclusions were made that athletes were more at risk for developing eating disorder symptoms than non-athletes.

There have been, however, studies that have shown that athletes are actually less at risk than are non-athletes (Marten DiBartolo, & Shaffer, 2002; Wilkins et al., 1991). Specifically, Marten DiBartolo and Shaffer (2002) found that athletes have less symptoms related to eating disorders and they function healthier psychologically than non-athletes. Additionally, there have been several studies that have found no difference in eating disorder prevalence between athletes and non-athletes (Fulkerson, Keele, Leon, & Dorr, 1999; Hausenblas & McNally, 2004; Kirk et al., 2001).

Prevalence estimates of the general population indicate that only 10% of individuals with eating disorders are male (American Psychiatric Association, 1994).

Disorders in males have a tendency to be more difficult to identify (Andersen, 1990). From this, it can be concluded that identifying eating disorders in male athletes can be difficult, and an important reason why more studies examine the prevalence of eating disorders in female athletes (Sherman & Thompson, 2001). Sherman and Thompson (2001) also believed that males would be less likely to report their eating disorders, to avoid being characterized as having a woman's disorder. Also, for sports that tend to focus on weight loss (i.e., distance running and wrestling), these athletes are able to hide their disorder due to stereotypes and accepted eating disorder behaviors (Thompson, 1998). Overall, results have shown that female athletes exhibit and struggle more with eating disorders than male athletes (Johnson et al., 1999; Reinking & Alexander, 2005).

Eating disorders are more common in sports that are weight-matched or emphasize leanness (Berry & Howe, 2000). High-performance female athletes from Canada, participating in lightweight rowing, judo, gymnastics, and diving, had significantly higher scores on an eating disorder inventory. These scores were compared to female athletes from non-weight restricted sports, such as volleyball and heavy weight rowing (Stoutjesdyk & Jevne, 1993). Sundgot-Borgen (1993) found athletes who used eating disorder behaviors were athletes from sports that were considered aesthetic, weight dependent, or endurance focused. In a study done comparing lean athletic groups to non-lean athletic groups, results indicated that female athletes in the sports that emphasized a thin build showed more body dissatisfaction, greater weight concerns, and more constant dieting than the non-lean athletic group (Davis & Cowles, 1989). In short, athletes that participate in competitive sports that emphasize thinness are more vulnerable for eating disorders (Smolak et al., 2000), especially among those with personality types such as

high perfection or low self-esteem (Fulkerson et al, 1999), or a belief that staying extremely lean will enhance their overall performance (Johnson et al., 1999).

There are a few studies that report contrary results (Benson, Allemann, Theintz, & Howald, 1990; Warren, Stanton, & Blessing, 1990). For example, in a study done by Warren et al. (1990) the responses between cross-country runners and gymnasts caused the authors to conclude that participation in a sport that emphasizes low body weight, which will increase performance, does not always present risk for eating disorders. Still, research has focused in the area of eating disorders in lean sports (Davis & Cowles, 1989; Petrie, 1993; Picard, 1999; Reinking & Alexander, 2005; Williams et al., 2003).

Judged sports run parallel to lean sports in terms of a high prevalence for eating disorders (Zucker, Womble, Williamson, & Perrin, 1999). Williamson et al. (1995) found that female athletes who participated in judged sports had higher body dissatisfaction than athletes in refereed sports. Judged sports include gymnastics, figure skating, and diving. Refereed sports include track and field and swimming (Sundgot-Borgen, 1994a). Refereed sports are considered to be sports determined by measurable performance, while judged sports are classified by success determined by a thin size, a child-like appearance, or a particular physique that pertains to the sport (Krane et al., 2001; Powers, 2000; Williamson et al., 1995). Zucker et al. (1999) studied athletes from judged sports, such as gymnastics, diving, cheerleading, and dance. These sports placed more importance on the individual's body appearance. They found that more eating disorders were prevalent among these athletes than the refereed sports (e.g., basketball, swimming, and cycling) that placed an emphasis on being in a good physical condition and having a strong focus on training. Athletes from refereed sports do not rely as much on individual body

appearance. Rosen and Hough (1988) found that because gymnasts wear revealing attire, making their bodies more noticeable, half of the female athletes surveyed were dieting to improve appearance and half to enhance performance. Greenleaf (2004) concluded that judged sports were more susceptible for eating disorder prevalence because of the focus on appearance, gracefulness, and physique, which emphasizes low body fat and the belief that low body fat will improve performance.

Within the Western society, there are sub-cultures that develop eating disorders more than others (Rucker & Cash, 1992). It has been found that black females may be less inclined to develop eating disorders than white females (Dolan, 1991; Gross & Rosen, 1988; Hsu, 1989). Rosen and Gross (1987) discovered that adolescent black females wish to lose weight less often than adolescent white females. In fact, adolescent black females would rather gain more weight than white females. Rucker and Cash (1992) studied the prevalence of eating disorders among white female college students and African-American female college students. The results of this study showed that African-American college females had more positive body-image attitudes than white females. Also, the African-American women, overall, had a positive interpretation of their appearance, had less negative thoughts about their body shape/size, and showed less concern about dieting/weight loss or becoming fat. The white females showed more negative behaviors with their body size (e.g., frequency of concealing or avoiding their body size), and experienced more problems while being weighed. They also had a higher drive for thinness and showed signs of frequent dieting and eating restraint. Striegel-Moore, Silberstein, and Rodin (1986b) believed that black women did not develop eating

disorders as often because thinness was not emphasized as a beautiful trait within black communities.

Among athletes, this trend seems to be consistent as well. Rosen et al. (1986), reported that only 18% of the black athletes surveyed showed signs of eating disorder behaviors, compared to the 33% of white athletes. Similar results were found in a study done by Sherman and Thompson (1993a), which showed black female athletes portraying no eating disorder behaviors, compared to their white counterparts, in which 18.3% participated in self-induced vomiting or the taking of laxatives. More studies need to be completed comparing the two cultures, however, in order to gain consistent conclusions about eating disorder prevalence.

Finally, level of competition is a major factor that may influence prevalence of eating disorders among female athletes. Sundgot-Borgen (1994a) believed that a relationship did occur between eating disorders and competition level. More specific, at the higher competition levels, there is more pressure to keep a specific body weight and the training regimen is more intense. Similar to this belief, studies have shown that higher competitive athletes report more eating disturbances than less competitive athletes (Picard, 1999; Stoutjesdyk & Jevne, 1993). Picard (1999) studied Division I female athletes and Division III female athletes and found that the Division I athletes displayed a higher prevalence of eating disorders and fear of gaining weight. There are, however, studies that have not found a relationship between level of competition and eating disorders in female athletes. For instance, Hausenblas and Carron (1999) found that at a higher competition level there was less prevalence of eating disorders than with female athletes at a lower competition level.

Sociocultural Factors

Because there are so many conflicting findings concerning eating disorders in female athletes, it is imperative to examine the sociocultural and personality factors among these athletes. The athletic environment places many pressures on athletes, specifically weight demands. Female athletes often feel that they must meet sociocultural ideals of body weight and shape. It is not uncommon for female athletes to compare their bodies to their teammates, and try and achieve the same body weight and shape as those they hold in high regard (Beals, 2000). Research has shown that female athletes receive a lot of pressure about their body weight from their coaches and teammates, and believe the athletic environment to be a cause for eating disorder behaviors (Beals & Manore, 1994; Sundgot-Borgen, 1994a). Coaches can play a significant role in the development of eating disorders in female athletes. One study reported that a significant number of athletes were dieting in order to lose weight, which was instructed to them by their coaches. The coach believed this would help to improve performance, and the athletes were dieting in order to meet the expectations presented by the coach (Sundgot-Borgen, 1994b). In another study examining coach pressure, 75% of female gymnasts were told that they were overweight by their coaches, and as a result they started taking part in eating disorder behaviors striving to reach the appropriate weight (Rosen & Hough, 1988). Garner, Rosen, and Barry (1998) concluded that in some instances, coaches too have had eating disorders or problem behaviors and may have developed destructive attitudes about weight control and the drive to be thin, toward their athletes.

Athletes might also have a tendency to hide their eating disorders from people who may be able to help them. Many athletes and their coaches view weight loss, diet

restriction, and increased exercise as a positive thing, because they believe this will enhance performance. Due to this accepted behavior, many athletes are afraid to admit that these behaviors have created an eating disorder. Specifically, they will not want to tell their coaches about this disorder in fear of displeasing the coach, and possibly resulting in loss of playing time or status (Sherman & Thompson, 2001). Coaches and teammates often urge their athletes to maintain a certain body weight or particular body shape that "looks good" or is aesthetically satisfying to the audience or crowd, as well as the judges. This may be due to the fact that players need to "make weight" in order to qualify for a certain category in competition (Rosen & Hough, 1988; Sundgot-Borgen, 1994b; Taub & Blinde, 1992; Thompson & Sherman, 1993b). Along with coaches, teammates have been found to have a greater influence on one another than peers in a non-athletic environment (Burckes-Miller & Black, 1991). Also, when athletes train together, compete together, and travel together, they begin to copy one another's behaviors and habits. Female athletes are more likely to model eating disorder behaviors performed by their peers. This could be a form of ritualistic behavior after a meet, or just traditions created by teammates (Swoap & Murphy, 1995).

Parents are also a triggering factor that may contribute to the development of eating disorders in female athletes. Thompson and Sherman (1993a) suggested that parents who have children with eating disorders are preoccupied with their own weight and eating habits; emphasized a physical appearance; relied on external factors to measure their self-esteem and personal success; have a history of alcoholism or depression; and experienced unhealthy child-parent interactions. Striegel-Moore et al. (1986b) found that parents may subtly allow eating disorder behaviors or unhealthy

eating habits. They also may strongly encourage athletes to be competitive with their sports and to succeed in a negative manner. Since the athlete's success and public representation may be shared by the family, this is where much of the family pressure is experienced (Sherman & Thompson, 2001). Sometimes, athletes feel that they need to take part in eating disorder behaviors to gain approval or recognition from their parents. In the end, parents have also been found to mention negative comments about their athlete's weight in front of them (Sherman & Thompson, 2001).

Cultural expectations regarding ideal body shape and size have been projected, for many years through the media, which makes the media another factor impacting the development of eating disorders. Studies have shown that exposure to the thin and muscular female images in magazines and television has made an impact on the development of eating disorder symptoms in females (Harrison & Cantor, 1997; Rodin, 1993). Harrison and Cantor (1997) found that magazines illustrating very thin models, and articles discussing dieting, were a consistent predictor of female eating disorder behaviors. Many women are looking to the media as a source for understanding cultural norms and expectations, so they will aspire to be what they see or hear. There is a belief that has been created through the media that states that anyone can achieve a "model figure" if they just work hard at dieting and exercising (Ressler, 1998).

Athletes may also be susceptible to the media's influences because they want to model their bodies after the fitness or athletic look portrayed on television and in magazines (Burckes-Miller & Black, 1991). In one study done by Bissel (2004) comparing the relationship of "thin ideal" media and female athletes, the "thin ideal" media was explained via images in a way that was promoting thin as important. It was

found in this study that athletes had high body dissatisfaction and a drive for thinness, as well as eating disorder behaviors. This was associated with the fact that these athletes viewed the "thin ideal" media, which could influence how they perceived their bodies and weight (Bissell, 2004). Athletes that are appearing on television repeatedly, or are being judged on television, receive more pressure to look a certain way or have a specific body type (Garner & Garfinkel, 1980).

The risk of developing an eating disorder may be higher in college due to the unknown of the new environment in which students find themselves; different social codes of conduct among many more varieties of groups; higher demands for academic performance and excellence; and little access to adult guidance (Root, Fallon, & Friedrich, 1986). Lacey, Coker, and Birtchnell (1986) found that significant transitions, such as geographic moves, or occupational changes, as well as changing relationships have been associated with the development of eating disorders.

When dealing with female college athletes, the academic and sporting community in which they are immersed plays a role in creating eating disorder behaviors (Burckes-Miller & Black, 1991). College student-athletes are at risk for developing high psychological stress due to demands in academics, long hours practicing and training for competition, and pressures associated with performance (Pinkerton & Barrow, 1989). These athletes live in this athletic environment, and they may not be offered any assistance with developing healthy approaches to manage stress and anxiety, or for promoting healthy eating patterns or habits. As a result, these athletes can develop poor eating behaviors that can later develop into eating disorders (Abood & Black, 2000). College campuses are semi-closed communities that can contribute great stress in a

student-athlete's life. Many college athletes are a part of other semi-closed communities on campus, such as student organizations or fraternities and sororities. With having multiple responsibilities in different groups on campus, along with the added stress of academics, this could also increase unhealthy weight loss methods among athletes (Black & Burckes-Miller, 1988).

Personality Factors

A number of specific personality factors have been investigated to determine their relationship to disordered eating among women. Some of these factors include perfectionism, self-worth established by external factors (Garner & Garfinkel, 1980), low self-esteem, and body dissatisfaction (Black & Burckes-Miller, 1988). Many authors have argued concerning the similarities between the factors affecting individuals with eating disorders and what it takes to be a successful athlete (Brownell & Rodin, 1992; Thompson & Sherman, 1999b). Many athletes and non-athletes with anorexia display characteristics such as a need for acceptance, perfectionism, high achievement expectations, drive for thinness and compulsiveness. For athletes, these characteristics help them to be successful in their sport, as well as increase their vulnerability to eating disorders (Thompson & Sherman, 1993a).

Perfectionism is a personal characteristic that has been linked to thinness and the development of eating disorders. Many studies have been conducted on the relationship between perfectionism and eating disorder symptoms (Garner & Garfinkel, 1980; Hopkinson & Lock, 2004; Kirk et al., 2001). Shafran, Cooper, and Fairburn (2002) found that the definition for clinically significant perfectionism is the "over-dependence of self-evaluation on the determined pursuit of self-imposed personally demanding standards in

at least one salient domain despite the occurrence of adverse consequences" (p. 1). Eating disorders have been described as direct expressions of perfectionism where by an individual takes part in controlling food and eating (Shafran et al., 2002). High perfectionism scores were found in patients with anorexia nervosa and bulimia nervosa (Pratt, Telch, Labouvie, Wilson, & Agras, 2001). Hopkinson and Lock (2004) found that female athletes showed significant increases in eating disorder patterns with increases in perfectionism. A reason for this could be related to the importance of weight projected by our society, and how a certain weight is believed to create beauty (Polivy, Garner, & Garfinkel, 1986). Athletes worry about rejection or failing, and as a result can be driven by their anxiety and fear. This could be in an effort to please others and be the best or even perfect in the eyes of teammates, coaches, and parents (Thompson & Sherman, 1999b).

Body Satisfaction

Body dissatisfaction is often seen as a factor that greatly impacts women and leads them to develop eating disorders (Furnham et al., 2002). Silberstein, Streigel-Moore, Timko, and Rodin (1988) described body dissatisfaction as the result of the difference between what society constitutes the perfect body to be, which creates an internal ideal, and the perceived ideal, which describes the use of dieting and exercise to fix the weight and fat that one believes is causing flaws. Body dissatisfaction in women is often shown by an attempt and desire to lose weight (Furnham et al., 2002). It seems that within this culture that promotes an extremely thin body type to signify beauty, which creates a discontent with weight, it is common for a woman to feel dissatisfied with her body. This has become a commonality among many women within this society

(Silberstein et al., 1988). Garfinkel et al. (1992) found higher body dissatisfaction in female college students who had bulimia nervosa, compared to female college students who did not have bulimia nervosa.

Body dissatisfaction is often found in groups that promote the thin ideal body, such as ballet dancers and models (Garner & Garfinkel, 1980), as well as athletes (Sundgot-Borgen, 1993). Garner (1991) found that lean-sport athletes (e.g., swimming or track and field) showed the same signs as patients with eating disorders. Specifically, they had a fear of fatness and an overall dissatisfaction with their body. Lean sports tend to emphasize weight control and attractiveness; therefore these types of sports often promote increased body dissatisfaction (Furnham et al., 2002; Silberstein et al., 1988; Tiggemann & Williamson, 2000). Athletes are known to exercise for reasons specifically tied to self-presentation, and due to this reason, many athletes are dissatisfied with their bodies and are at risk for developing eating disorder behaviors (Davis, 1990). Zucker at al. (1999) found that judged sport athletes (e.g., diving or gymnastics) reported significantly more body image dissatisfaction and greater concern with body size and shape than did refereed sports (e.g., soccer or lacrosse).

Women are found to find dissatisfaction in their bodies more than men (Cooper & Fairburn, 1983; Furnham & Calnan, 1998). More specific, Pritchard et al. (2007) found female athletes to have greater body dissatisfaction and disordered eating than did male athletes. These results are similar to previous research done by Hausenblas and McNally (2004) who found that among high school and college women and men, women reported higher body dissatisfaction and eating disorders than did men. In a study of athletes, it was found that approximately 14.5% of the female athletes thought they were fat and

were dissatisfied with their body, even though they had lost weight and were not overweight (Burckes-Miller & Black, 1988b). Similarly, in a national survey of runners and body image dysfunction and eating disturbances, nearly 57% of the females and 37% of the males reported that they were dissatisfied with their body shape and size (Brownell, Rodin, & Wilmore, 1988).

Though many studies have found a prevalence of high body dissatisfaction in athletes, there are conflicting results. Schwarz, Gairrett, Aruguete, and Gold (2005) found greater body dissatisfaction in non-athletes compared to athletes. Other authors have also found this to be the case (Marten DiBartolo & Shaffer, 2002; Hausenblas & McNally, 2004; Reinking & Alexander, 2005). This could raise the possibility that body dissatisfaction could be unrelated to the development of eating disorders among athletes. One reason for this could be the greater emphasis that athletes place on their performance, negating certain motivations (e.g., drive for thinness) that might originate from concerns over one's appearance. Athletes are active and take part in intense training, allowing bodies to become healthy and toned, without any external factors (i.e., eating disorder behaviors) pursued (Wilkins, 1991).

Only a few studies of women athletes have explored the role of body dissatisfaction as a predictor of eating disorders in conjunction with other variables. Burckes-Miller and Black (1991) concluded that women who believed that they do not have the ideal body shape will likely develop diminished self-esteem, which may lead to eating disorder behaviors. These actions can also lead to an athlete's belief that they are not satisfied with their body, and in order to raise their self-esteem and reduce body dissatisfaction, they must continue with these eating disorder behaviors. Davis (1990)

studied exercisers and non-exercisers and found that there was a greater weight and diet concern, along with body dissatisfaction in the exercise group. With these women exercisers, it was also found that the way they looked physically was important to their self-esteem. Vohs et al. (1999) found that a decrease in self-esteem may contribute to a negative body image, as well as bulimic symptoms. Finally, it was found that low self-esteem is a major risk factor for developing an eating disorder and is highly correlated with body dissatisfaction (Mable, Balance, & Galgan, 1986; Mintz & Betz, 1988; Thompson, 1996). It seems important to study more than just one factor when focusing on the development of eating disorders. Body dissatisfaction and low self-esteem appear to be strongly related and exploring athletes with eating disorders and their attitudes on these two personality factors will likely help to better understand how such factors impact eating disorders, as well as help aid the treatment process.

Self-Esteem

Robson (1989) concluded that high self-esteem is being content and accepting of oneself, based on one's appraisal of self-worth, significance, attractiveness, competence, and ability to satisfy self-aspirations. Self-esteem and body image are two major factors that have been associated with eating disorders (Furnham et al., 2002). Low-self esteem is a personality factor that is commonly seen in eating disorder patients. Furthermore, self-esteem is related to self-awareness, which is a factor in the development of eating disorders among individuals (Lindeman, 1994).

Specific to women, low self-esteem is important to recognize at an early age. It has been found that low self-esteem has a strong negative effect on dieting and binging in young adolescent girls (Neumark-Sztainer, Beutler, & Palti, 1996). Individuals who

perceive a negative sense of self, placed in a culture obsessed with physical perfection and the ideal body type, and attained at any cost, are likely to develop lower self-esteem (Furnham et al., 2002).

In the recent years, more research has focused on how exercise, or being involved in athletics, is related to self-esteem and development of an eating disorder. Berry and Howe (2000) found that female university athletes with low self-esteem were more likely to have competitive anxiety and take part in eating disorder behaviors, compared to higher self-esteem individuals tested. Engel et al. (2003) also found that low self-esteem leads to eating disorder behaviors among athletes. In addition, how one performs in their sport can affect their self-esteem, which can then also impact the risk of developing an eating disorder (Johnson, 1994).

Krane et al. (2000) found that athletes typically strive to meet an ideal body type, and if they cannot meet that body type, they may develop unhealthy thoughts and behaviors, creating a lower self-esteem. This unattainable body type can cause self-esteem to stay at a very low level. This would not likely change unless the athlete realizes her body type is unrealistic and not beneficial to her well-being. Society has placed an emphasis on being thin; therefore young women often view weight loss as the solution to manage their self-esteem. However, weight loss can lead to behaviors such as binge eating, which may in turn increase their low self-esteem (Johnson, 1994). Athletes with eating disorders often feel driven to do well in their sport in order to avoid obesity, as well as trying to please significant others in their life. They may not be participating because they enjoy it, and under these circumstances, female athletes rarely find

excitement or joy, as well as happiness, in their achievements, regardless of how significant they are (Thompson & Sherman, 1993a).

Despite previous research supporting the connection between athletics and low-self-esteem, there has been research which shows conflicting results. Typically, it has been assumed that athletes show higher self-esteem and body satisfaction than non-athletes (Marten DiBartolo & Shaffer, 2004; Wilkins et al., 1991). More specific, among non-athletes in non-sport settings, research has shown that people who have low self-esteem are less happy and experience more anxiety than people with high self-esteem (Baumeister, 1993). Fox (2000) concluded that exercise is a main factor for raising one's self-esteem.

Treatment for Athletes

There is more information about the treatment of non-athlete eating disorder patients, and less information provided focusing on the treatment of athletes with eating disorders (Swoap & Murphy, 1995). Therefore, much of the treatment that an athlete receives is similar to that of a non-athlete. Treatment for an athlete with an eating disorder should include individual therapy, focusing on the patient as a person and not on their eating behaviors. It is important to also educate the athlete about weight issues. With that said, it is beneficial for the therapist to enhance the athlete's body image perception, which can help to separate self-esteem from societal expectations of weight and body shape (Swoap & Murphy, 1995). Another form of treatment is group therapy. This allows athletes to support one another when sharing their experiences, realizing they have commonalities with aspects of their disorder in which they struggle (e.g., competitive pressure, demanding coaches, etc.). Athletes are often able to learn from one another and

instill hope among each other in a group setting (Yalom, 1985). Using the athlete's "family" as a form of therapy can also be a beneficial treatment. The athlete's family often includes the coach, nutritionists, and closest teammates and family members. This family would need to show their concern for the athlete, as well as be a part of the education therapy process. They would also have to address the impact they have on the athlete (Swoap & Murphy, 1995). Having a nutritionist or dietician involved is imperative. They are able to provide nutritional education, as well as, provide a meal plan for the athlete (Thompson & Sherman, 1993a). Finally, depending on the severity of the disorder (i.e., use of severe eating disorder behaviors), the athlete can be informed about inpatient treatment options (Swoap & Murphy, 1995).

The primary goals of treatment are to restore a healthy weight to the athlete and instill healthy eating in their daily routine. Also, athletes need to be taught more positive and helpful ways of thinking, as well as better strategies for coping with their feelings. The ultimate challenge for the athlete is to change their behaviors and thoughts (Thompson & Sherman, 1993a). Having athletes understand that there are alternative ways, that are much healthier in achieving a better performance, is important to the treatment process (Thompson & Sherman, 1993b). Thompson and Sherman (1999b) found that athletes are mentally tougher than non-athletes and are often willing to do whatever it takes to recover. Many athletes approach the act of treatment the same as participating in their sport – they will put in great effort to achieve their goal. Ideally, the treatment process should be led by someone who understands eating disorders and has worked in the field of competitive athletics (Wichmann & Martin, 1993).

Prevention for Athletes

In order to limit the prevalence of eating disorders in athletics, prevention is imperative. Communicating knowledge about eating, nutrition, weight, sport performance, and health to athletic populations is very important. There are many ways to go about doing this, such as workshops at the university, interviews in the media, talking with coaches, and discussing issues with teams or individual athletes. Every athlete is at risk, so there should be no limit on who is addressed on prevention (Swoap & Murphy, 1995). Since eating disorders are occurring at young ages, it would be vital to start these prevention programs in middle schools and high schools.

In order to de-emphasize body weight, coaches and athletes should understand that there is no ideal body image or weight within the realm of athletics or in the general community. Teams, coaches, parents, and athletic personnel should also be properly educated on the correct knowledge relating to nutrition (Swoap & Murphy, 1995). Coaches, staff personnel, and parents should be sensitive to issues of weight control and dieting practices. This means that there should be an elimination of group weigh-ins, goals for a specific weight, punishment for not reaching a certain weight, comments made about weight, and correlating weight loss and performance enhancement (Swoap & Murphy, 1995).

Researchers have stated that educational workshops specific to eating disorders, may glorify the idea of eating disorders and possibly enhance eating disorder behaviors to athletes (Garner, 1985; Hsu, 1990). Discussing proper nutrition and healthy methods to staying fit is important. Sport personnel should also be aware of the factors impacting eating disorders in athletes. For anorexia athletica and female athlete triad, there are

specific symptoms to look for. For example, coaches and trainers should be aware of a female athlete's menstrual status (Thompson & Sherman, 1993b).

Universities and college athletic departments should take part in pre-participation screening, to address whether or not the athlete is at risk prior to membership on a team. Also, they should have a referral or treatment plan prepared for when eating disorders are recognized (Beals, 2000). Beals (2004) suggested only one-on-one weigh-ins to be completed by the team physician, so that appropriate feedback can be provided and weight can be monitored appropriately. Finally, confidentiality should be established, so that athletes do not worry about their privacy concerning their weight and performance. Consent should also be established in any instance of disclosure with the athlete and specific sport personnel (Thompson & Sherman, 1993a).

Athlete peers and friends are often ones to suspect an eating disorder because they spend so much time together. Therefore, a focus on these teammates or peers and teaching them about how to recognize symptoms of eating disorders is vital. Finally, team competition to be thin and team weight loss and dieting should be controlled (Petrie & Rogers, 2001). Early identification and intervention programs must be implemented in colleges and universities in order to prevent eating disorders from developing or to help athletes struggling with the disorders, recover in a healthy and appropriate manner (Reinking & Alexander, 2005).

Summary

The DSM-IV has clearly defined several different eating disorders (American Psychiatric Association, 1994). These disorders have become more common among the culture of sport, particularly among female athletes and within specific sports (Sundgot-

Borgen, 1994a). Research has explored the prevalence of eating disorders in athletes versus non-athletes (Beals & Manore, 1994; Hausenblas & Carron, 1999), as well as male athletes versus female athletes (Reinking & Alexander, 2005; Sherman & Thompson, 2001). Lean athletes versus non-lean athletes (Davis & Cowles, 1989; Sundgot-Borgen, 1993) have also been thoroughly examined, along with competition among athletes (Picard, 1999; Sundgot-Borgen, 1994a). Finally, body satisfaction (Cooper & Fairburn, 1983; Furnham et al., 2002; Garfinkel et al., 1992; Sundgot-Borgen, 1993) and self-esteem (Berry & Howe, 2000; Furnham et al., 2002; Lindeman, 1994) have been found to influence athletes with eating disorders. In the athletic environment, knowledge of proper treatment and methods to prevention will likely help to prevent eating disorders for future athletes, as well as improve overall performance and length of athletic careers (Swoap & Murphy, 1995).

Chapter 3

METHODOLOGY

The purpose of this study was to identify the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem. This chapter contains a description of the research design, participant, procedures, data collection, measurements, and data analysis.

Research Design

A qualitative research design, with a case study format was used to identify the views of a female student-athlete with clinical eating disorders. Qualitative research is described as a focus on the description, understanding, and meaning of a phenomenon. The researcher gathers and observes data in the natural setting, and develops hypotheses from the observations (Thomas & Nelson, 2001). A semi-structured interview was conducted in this case study and followed a specific interview guide. Interviews are the most common source of data collection within qualitative research and allow for the participant to open up and describe their feelings, thoughts, and emotions (Thomas & Nelson, 2001). Along with the interview guide, the primary researcher was able to ask additional questions that "probed" the participant during the interview, depending on what the participant answered initially. The semi-structured interview contained open-ended questions that allowed the participant to explore and answer freely, in any direction she wanted. The participant was not restricted by the interviewer and was able to express her ideas and opinions to the full extent (Aira et al., 2003). A follow-up interview was also performed to explore specific areas that were previously mentioned, but not discussed in detail in the first interview. During the interviews, the participant was asked

to discuss her thoughts about her self-esteem and body satisfaction, as well as other aspects of her eating disorders.

A case study was used for this investigation due to the sensitive topic and specialized nature of the subject. At the time of this research, the subject was a two-sport athlete at a Division III institution, with two separate eating disorders; anorexia nervosa and bulimia nervosa. Yin (2009) stated that the case study method allows investigators to find and interpret holistic and meaningful events of real-life situations of the subjects that they are focusing upon. Stake (1995) described that in a qualitative case study, researchers seek greater understanding of the present case. The goal is to appreciate the uniqueness and complex ideas that come from that specific subject. A case study format also allows one to find areas for further investigation, as well as establish limits of generalization (Stake, 1995).

Eisenhardt (1989) showed that case studies typically combine data collection methods such as archives, interviews, questionnaires, and observations to explore experiences of a single or multiple subjects. As mentioned, exploration of body satisfaction and self-esteem of female student-athletes has not been thoroughly investigated in a qualitative manner. Using the method of interviewing for this case study, there was an opportunity to explore the areas of body satisfaction and self-esteem in a Division III female-student athlete with eating disorders.

Participant

The participant in this study was one (n = 1) female student-athlete recruited from intercollegiate athletic teams at a Division III institution in Central New York. The participant was 22 years of age, and had received clinical treatment (i.e., medical and/or

psychological) for an eating disorder within the last 12 months. This athlete participated in the sports of swimming and lacrosse (see Appendix A for additional biographical information).

Recruitment of the participant occurred after approval from the institution's Human Subjects Review Board. Before the interview the participant signed an informed consent form (Appendix B) and received counseling referral information (Appendix C).

Procedures

The participant was recruited from intercollegiate athletic teams, as well as the academic classroom in the following manner:

1) At the respective institution, a phone call or email was placed to all of the coaches of the female intercollegiate athletic teams, as well as the professors in the Department of Exercise and Sport Sciences to request permission to attend a team meeting or class period to recruit a participant for the study.
2) Once permission was provided through email or phone, a time and place was set up between the coach/professor and the primary researcher to explain the study and provide additional information.
3) At a team meeting or class meeting time, it was clearly stated that only a female athlete with a clinical eating disorder was able to volunteer for the study, even though the recruitment statement (Appendix D) was given to all who were present.
4) The primary researcher's information was provided on the recruitment statement and it was made clear that if an athlete was interested in participating, she should

contact the primary researcher by phone at a later date in order to set up a time for her first interview.

Once an interested participant contacted the primary researcher, an initial interview was scheduled. The initial and follow-up interviews were conducted in a private location to ensure confidentiality. Also, all recorded data collected were secured in a locked cabinet accessed by only the primary researcher. The only people present at the interviews were the primary researcher and the participant. The initial interview followed a specific interview guide and lasted between 60 and 90 minutes. After the initial interview, a follow-up interview was scheduled that lasted between 20 and 30 minutes. This follow-up interview also followed a specific interview guide that consisted of questions in relation to the responses from the initial interview.

Data Collection

Before the first interview, the participant was informed that everything she shared during the interviews would be kept confidential and her participation would be voluntary. Both the initial and follow-up interviews were conducted based on a semi-structured format. The primary researcher asked questions that were specific to the topic, yet she was free to probe questions when necessary. The interviews with the participant took place in a private location that was acceptable to both the primary researcher and the participant. The participant was also told that she may withdraw from the study at any time, or refuse to answer any questions. Both interviews were tape-recorded and later transcribed verbatim by the primary researcher. A pseudonym was assigned to the participant and was used throughout the transcription process and in the final analysis to assure confidentiality and anonymity. The participant was sent a written copy of each

transcription from her initial and follow-up interviews. This allowed the participant to verify/clarify and validate all wording or phrasing she used in the interview, as well as make any other changes she deemed necessary.

Measurements

Bracketing Interview

A bracketing interview was conducted before the actual interview with the participant. A trained qualitative researcher, who was knowledgeable in both counseling and qualitative research methods, conducted the semi-structured interview with the primary researcher playing the part of the participant. After the interview was conducted, it was transcribed and analyzed. The process of the bracketing interview allowed for the primary researcher to identify and eliminate any biases, by way of transcribing and analyzing the data, as well as through the process finding common themes. From the data analysis of the bracketing interview, two major biases of the primary researcher were found. The first bias was the belief that all female-athletes with eating disorders created excuses for their eating disorders, which caused poor body satisfaction and low self-esteem. The second bias was the belief that all female-athletes with eating disorders strived for perfection which helped to manage their body satisfaction and self-worth. Through constant awareness and reflection of these personal biases, the primary researcher was able to remove her biases from the data and allow for the initial interview to be performed and analyzed without researcher biases.

Interviews

The interviews followed a semi-structured format that allowed the primary researcher freedom to probe depending on the participant's responses to the initial questions. The initial and follow-up interviews contained questions developed from the

literature focusing on eating disorders, as well as consultation with faculty advisors. Topics on the interview guide included questions surrounding 1) demographics; 2) eating disorders; 3) body satisfaction and; 4) self-esteem (see Appendices E and F). The research question explored was: What is the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem?

Data Analysis

The data set analyzed included the transcripts from the initial and follow-up interviews between the primary researcher and the participant. Analyses of the data were conducted using the qualitative process adopted from Shelley (1999):

1) The initial interview of the female student-athlete was transcribed verbatim by the primary researcher and given to the participant for her to review for accuracy, and to enhance credibility.
2) The follow-up interview of the female student-athlete was then transcribed verbatim by the primary researcher and given to the participant for her to review for accuracy, and to enhance credibility.
3) The participant's review provided no changes to the initial interview or the follow-up interview.
4) The primary researcher read over and reviewed the interviews (i.e., one at a time) in order to immerse herself in what was discussed and to grasp the main ideas and thoughts of the participant.
5) The primary researcher then selected significant statements/phrases related to the research question from the initial interview transcription. These statements were thoughts, feelings, and/or emotions regarding the participant's views about her

body satisfaction and self-esteem and how each had been impacted by her eating disorders.

6) The primary researcher then selected significant statements/phrases related to the research question from the follow-up interview transcription.
7) Categories were created based on the content of the specific statements from the initial interview.
8) Categories were created based on the content of the specific statements from the follow-up interview.
9) Categories were combined from both interviews.
10) Meaning units were then created from the significant statement categories. These units contained similar significant statements and were grouped together accordingly.
11) The meaning units were then grouped into lower-order themes by combining similar meaning units.
12) The lower-order themes were compared and formulated into higher-order themes, again by combining similar lower-order themes. These higher-order themes presented the initial answers to the research question for the participant.
13) Finally, the participant was provided an opportunity to look over the final themes. At that point, she was free to change any of the final phrases or words in the higher-order themes presented.

Chapter 4

RESULTS

The purpose of this study was to identify the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem. Inductive content analyses generated 266 significant statements which were combined into 39 meaning units. The meaning units were categorized into 14 lower-order themes. The 14 lower-order themes were then categorized into six higher-order themes, comprising the answer to the overall research question.

The six higher-order themes included: 1) Eating behaviors were a way to control her life; 2) Eating behaviors lead to a negative self-perception; 3) Conflict with family developed due to eating behaviors; 4) Eating behaviors caused for poor performance in sport; 5) Eating behaviors generated self-isolation causing self-loathing and internal discord; and 6) Self-perceived coping strategies enhanced her lifestyle. Together, these six themes described the athlete's experiences with her body satisfaction and self-esteem and answered the outlined research question, "What is the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem?" Each theme, and supporting quotes, is presented below.

Theme #1

Eating behaviors were a way to control her life

In this study, the athlete spoke about how she had controlling tendencies and issues with planning when it came to food and her eating disorder behaviors. This theme was first reflected in the following statements about her issues with control and eating:

> My therapist and I worked on what's making me revert to my controlling tendencies of controlling food. If I'm upset and I get a bad grade, it influences me

> because I can't control the fact that I got a bad grade. I can control studying, after the fact, that I didn't do as well as I had hoped. I revert back to the only control I have – I can control my eating.

She also expressed how having a plan/routine played a big role in her eating disorders:

> I get very nervous when I have to go home because I don't have my set routine. I think routine is a huge thing when you have an eating disorder. You know, I go day to day by eating safe foods that I know can get me through the day. When something throws that off, it really affects the eating disorder. I need to have two or three days to plan how I want to handle situations at home. I'm trying to figure out what I want to do and get out of that situation which might trigger a lot of things.

When she had a plan for eating safe foods and figuring out how to avoid trigger situations, she was able to manage how she felt about her body and what she ate, as well as how she felt when she was in her home environment.

It was also expressed that when she was experiencing poor body satisfaction (image), she used her routine and a pre-planned mindset to manage her body and the food that she consumed:

> I pretty much set myself up, when I have a bad body image day, for pre-planning binges or pre-planning not eating.

In addition, she planned out how to hide things from her family:

> When I was at my friends house, I would tell them I had dinner at home so I wouldn't have to eat – so I wouldn't have to be around anybody that would make me eat. [I plan out] that when my parents go to bed, I need to be able to throw up or binge and purge. Or if they are not going to bed this soon, I'm going to go take a shower…and then I throw up.

In sum, she was able to control how she felt about her body by following a planned routine and while consciously deceiving her family about her eating disorder behaviors.

Theme #2

Eating behaviors lead to a negative self-perception

Interview data revealed that this athlete did not think highly of herself. She created a negative perception of herself, which in turn created a low self-esteem and body dissatisfaction. She created this negative perception of herself based on the opinions of others:

> People would [say] that I am very angry, a lot. I'm defensive. I get nervous a lot. Being tired, agitated, angry, defensive – all those characteristics describe my personality. I ignore people. I get angry with people.

She also created this negative perception based on how she viewed her physical appearance. She formed poor body satisfaction based on her constant judging:

> When I look in the mirror, I see an overweight girl who needs to lose weight. I judge my physical appearance every day. Judging my physical appearance is a constant thing – it doesn't stop with me. When I eat, it really affects how I feel about myself because I judge that it's going to my quads. If I'm having a bad body image day, my whole day is pretty much low self-esteem. I'm not good enough. I don't look good. I shouldn't be here. Bad body image day means I think I'm too fat. I'm judging myself.

She also discussed how she compared herself to others based on their physical appearances, as well as her perception of what others might be thinking. These constant comparisons led to a decrease in body satisfaction:

> I was in class with all the cheerleaders and I really admired their body shape. They always ate snacks and I would just sit there and want to do that. I wanted to look slim for everybody else. Since I've had an eating disorder, I walk into a room and automatically compare myself to other girls. Her thighs don't touch – my thighs do. My butt sticks out – her butt doesn't. My arms aren't skinnier than her arms.

In addition, she specifically focused on her teammates and constantly compared herself to them. She was well aware of how her eating disorder behaviors were affecting her physically, but she still focused on how everyone else looked and performed physically:

> I was decent enough to make the college team, but there's a clear difference between me and the girls that don't have an eating disorder. You can definitely tell there's much more muscle on my teammates. I have muscle on me too, but my teammates have much more power – more stamina.

Another important aspect of her physical appearance was the way her clothes fit on her. This directly affected how she felt about herself:

> Clothes that don't fit affect a negative perception of my body. I get very upset when my mom buys me a size 2 and size 2 doesn't fit around my hips. I take that as I'm too fat. It frustrates me when someone asks me what size pants I am and I say that I am a 6 – they say that I'm not and I am too thin to be a 6. The pant size really agitates me. It's really hard for me to put on clothes and say I look okay and just go to school.

Finally, she expressed that she had poor self-worth which contributed to this negative perception of herself. This poor self-worth and low self-esteem has remained constant throughout her struggle with her eating disorder behaviors:

> I seem to not ever think that I'm ever good enough for anything. I'm never good enough for myself. I judge myself way too much. I'm really hard on myself. I feel like I'm useless because I can't function throughout the day like a normal person can. It's really hard for me to accept positive feedback from people because I can't believe it myself.

> I notice my self-esteem is a problem, but right now I don't feel like I can get out of the fact that I think I'm worthless sometimes. There's always an underlying factor that I think I am a waste of space. When I feel like that…I revert back to my eating disorder. I ignore people. I get angry with people. I don't really think I can handle the way I feel about myself very well.

Theme #3

Conflict with family developed due to eating behaviors

In both the initial and follow-up interviews, she spoke about her conflicted relationships with her mother, father, and brother and how they were affected by her eating disorder behaviors. These conflicts with her family caused her to become dissatisfied with her body and feel negative about herself. She discussed her conflicting

relationship with her mother, which played an important role in her eating disorder behaviors:

> My mom said that an eating disorder was my issue and I had to deal with it. She said she had nothing to do with my eating disorder therefore she shouldn't be in the therapy and discussing my problems. My mom said she doesn't care if I don't eat a lot. She would rather me be anorexic than bulimic, just because of the consequences of bulimia.
>
> I get scared that my mom's always watching me. I think my mom and my relationship is like walking on egg shells all the time. You're always looking out. I think when my mom and I talk about my issues I get really depressed, because I don't like talking about them with her. I hate talking about my eating disorder with her because she doesn't get it. It makes me really hate what's going with me because I can't get it across to her. I don't like it when my mom is up-front with me. She's just so blunt towards me that it hits me personally.

She also spoke about her relationship with her father and how she disagreed with his views on her eating disorder:

> My dad is very religious, so he [said] God will take care of [my eating disorders]. He said I don't need to go to therapy. He said I need to pray to God. I'll be ok. And obviously I don't think like that. So there's a lot of confliction.

Furthermore, this athlete discussed her relationship with her brother and how it too has turned into a frustrating relationship. She constantly compared herself to her brother which has added to her body dissatisfaction:

> My brother always says that I can just change whenever I want to. He had no empathy for me. He didn't understand what I was going through. He said I didn't need my family to go into therapy and talk about why I was struggling with eating. When my brother talks about my eating disorder, it gets me frustrated and I need to talk to my therapist about that. My brother got frustrated with the fact that I was talking to my therapist about them. My brother gets mad and he and I just verbally argue because he is so sick of my eating disorders. I get mad at my brother because he's lost a lot of weight. I think his appearance has really triggered me because I get really upset. I've never really compared myself to my brother before but I compare myself to him now because he's lost a lot of weight. I really hate that aspect of him.

As already stated and as a result of this conflict with her family, she began to deceive her family about her eating habits. With that said, she was aware of her behaviors and wanted to change the way she thought and felt. However, she did not believe that such change was realistic:

> My parents would give me 20 dollars to get whatever I want, but I just saved the money because I didn't want to eat at school. I would put the dirty dishes in the sink so it would look like I ate a sandwich but I would give the food to my dog. I would throw away food in my neighbor's garbage to show that there was food missing in the fridge, so it looked like I ate it. It scares me because I want to be normal but I really can't be normal in reality because I'm hiding everything from my parents.

Theme #4

Eating behaviors caused for poor performance in sport

It was also evident how this athlete's eating disorder behaviors had negatively impacted her sport performance. She became upset with herself and how she was performing. She was constantly aware of her eating behaviors and how they took a toll on her body in practice and competition; however she continued to participate despite these harmful affects. For example, she stated:

> I was on the swim team when diagnosed with the eating disorders, and I didn't do very well. I was very frustrated that I wasn't doing very well. I went back into swimming and then had a downfall after the season again.
>
> Not eating affects my training big time. I didn't do weights after swim practice because I am so worn out. I get muscle strains a lot easier – I get cramps a lot easier. I get dehydrated and lack nutrients. After not eating and not drinking all day, I go to a 2 hour practice and my foot starts cramping up, so I have to get out of the pool.
>
> There have been times when we've had a swim meet on Saturday and I've binged and purged on Friday night. The actual performance of that was not very good. I was a lot slower. My body just felt really heavy in the water. I had no energy to do anything. I got out early a couple of times because my body had nothing to go off of.

> Swimming and then going to lacrosse practice, I didn't eat anything in between. I couldn't keep up with the conditioning. It was a lot harder.

In short, poor performance negatively impacted her feelings during practice and competition and she became constantly frustrated with how her body was affected, which in turn impacted her performance.

Theme #5

Eating behaviors generated self-isolation causing self-loathing and internal discord

This athlete also openly discussed how she distanced herself from others, as a result of her eating disorder behaviors. In fact, she viewed herself as an outsider, which was something that she did not like:

> It felt like I was an outsider and I was the only one in the class that was like that. During the off-season I always try to workout by myself. Just being by myself – not being around other people. I live by myself. I don't like to live with other people.

She also expressed that the eating disorders were a major reason why she became an outsider and why she started to hate herself:

> I still feel like an outsider. I don't notice that other people are trying to be friends with me and then they give up. The eating disorder behaviors really make me feel like an outsider because I am so consumed with them. Being an outsider makes me look at myself and hate myself even more. I don't have friends because I live by myself. I'm not happy with being an outsider.
>
> I feel like I'm just so self-absorbed with the eating disorder and how it consumes my day. I don't notice that other people are trying to be friends with me and they just sort of give up.

She also mentioned that her relationship with her teammates caused her to distance herself even more, and as a result, feel depressed:

> I live by myself. I don't really like to live with people. So it was difficult in the fact that I got housed with teammates.
>
> After break and coming back to school, I shied away from my teammates. I didn't really do much with them. I didn't want to talk with them. It put me in a

> depressive episode. I don't want to talk with them. I don't want to be around my teammates anymore.

Finally, this athlete explained that by choosing to live by herself she was choosing to be isolated, and as a result, she felt unhappy:

> I dislike [being isolated] even more just because I don't have friends because I live by myself, even though I know, I have to think that I do this to myself, but I don't really intend to, so it just makes me not happy.

To conclude, she realized that her own decisions were what isolated her and therefore created these negative feelings of self-hatred and unhappiness.

Theme #6

Self-perceived coping strategies enhanced her lifestyle

Throughout both interviews, this athlete also discussed specific strategies she used to help her cope with her eating disorders and what helped her get through a typical day. From using these strategies, she discovered that she could positively impact her self-esteem and body satisfaction. For example, she mentioned how several coping strategies, learned in therapy, helped her get through a day:

> I have learned a lot of different coping strategies. They have helped me try and communicate with my family better. A lot of coping strategies have really come out of therapy. The first coping strategy was swimming or playing sports – being physically active. [Also] writing in a journal or coloring. I found that playing cards really helps. Also, playing board games with people and talking on the phone. I have learned to handle the situation of my eating disorder a lot easier.

She also mentioned a coping strategy that she formed for herself outside of therapy. She used comparisons to peers who are unfit or bigger than she was, in order to feel better about herself and get through the day:

> It helps me to remember that other people have other issues too. I got out there and I see other people that are a little big bigger than me. I think that "she looks fatter than me" so I can be ok for right now. This helps me rationalize it so I can

> get through the day. In the long run, that strategy… [of] comparing myself to other people, helps me day-by-day, hour-by-hour.

These comparisons created higher self-esteem and better body satisfaction for this athlete. She also discussed the idea of distortion and how she reminded herself of this concept in order to help her cope and feel better about herself:

> I think body image and satisfaction with body image are huge factors in eating disorders, in the fact that it is very distorted. Realizing that body image is a distortion – sometimes it helps but sometimes it doesn't. Being told that throughout the years has played a really huge factor in me getting through the day. Seeing that body image is distorted and reminding me of that routinely during the day really affects how I see myself. Realizing that I'm not seeing what I should be seeing reminds me not to judge myself as much.

In addition, she discussed how her positive body image was directly related to her coping strategies:

> After workouts, I will get a little bit more positive about my body. Good body image day to me is when I can go throughout the day without really thinking or trying to tweak my body. Effects of a good body image day help me interact with my peers in a more healthy way, when they won't think I'm mad. I think having things to do triggers a good body satisfaction. Having something to do and eating a little bit less.

Lastly, this athlete coped with her eating disorder behaviors by removing herself from her household. She believed that her house created an atmosphere where she felt the need to take part in her eating disorders, so she removed herself from that negative location and as a result, felt better about herself and her body:

> I think having things to do triggers a good body satisfaction. Having something to do and eating a little bit less. Having something else to do kind of helps me stay moving. Not concentrating on the idea that my stomach is fat and I'm sitting down, and in 30 minutes I have to eat lunch. Just being out of the house and away from that atmosphere.

In the end, this athlete did develop specific coping strategies as she reported. Many of these coping strategies worked to improve her body image, satisfaction, and self-esteem.

Summary

Six higher-order themes were identified from the analysis of the initial and follow-up interviews. They included: 1) Eating behaviors were a way to control her life; 2) Eating behaviors lead to a negative self-perception; 3) Conflict with family developed due to eating behaviors; 4) Eating behaviors caused for poor performance in sport; 5) Eating behaviors generated self-isolation causing self-loathing and internal discord; and 6) Self-perceived coping strategies enhanced her lifestyle. Together, these themes described the athlete's eating disorder experiences and the impact of these disorders on her body satisfaction and self-esteem. Specifically, the results indicated how eating disorder behaviors can impact a Division III female collegiate athlete's body satisfaction and self-esteem.

Chapter 5

DISCUSSION

The purpose of this study was to identify the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem. The following six themes emerged from this study: 1) Eating behaviors were a way to control her life; 2) Eating behaviors lead to a negative self-perception; 3) Conflict with family developed due to eating behaviors; 4) Eating behaviors caused for poor performance in sport; 5) Eating behaviors generated self-isolation causing self-loathing and internal discord; and 6) Self-perceived coping strategies enhanced her lifestyle. In this chapter, these results are discussed in relation to existing literature.

Theme #1

Eating behaviors were a way to control her life

Previous research supports that one of the most common assertions regarding eating disorder patients is that they have perceived lack of control over any aspect of their lives, so they often revert to full control over their bodies (Bruch, 1988; Rezek & Leary, 1991; Slade, 1982; Whyte & Kaczkowski, 1983). More specific, anorexics and bulimics generally have negative emotions associated with a lack of control over their external world, which then often results in a great desire for full control over their bodies (i.e., compensating for the lack of control of external factors; Burger, 1992; Rothbaum, Weisz, & Snyder, 1982). The athlete in this study showed evidence of this when talking about her experiences at school:

> If I'm upset and I get a bad grade, it influences me because I can't control the fact that I got a bad grade. I can control studying, after the fact, that I didn't do as well as I had hoped. I revert back to the only control I have – I can control my eating.

She explained that she was not able to control the grades that she received in school and how receiving a poor grade, and not having any control over that grade, caused her to revert back to the one control she knew that she had – her eating.

Additionally, it has been suggested that there is a need for self-control in anorexic patients, which is likely to be a product of these individuals' ineffectiveness and perfectionism (Vitousek & Manke, 1994). This, in turn, connects with low self-esteem which is often apparent throughout the development of an eating disorder (Bruch, 1973; Fairburn et al., 1999). Fairburn, Shafran, and Cooper (1998) discussed that when one takes control over their eating, this directly enhances the person's sense of being in control and thereby their self-worth. Vitousek and Ewald (1993) described anorexic patients who invested in this self-control as feeling "delighted, inspired, triumphant, proud and powerful" (p. 223). In relation to this current study, that athlete discussed how her control and planned routine helped her to manage how she felt about her body and her own self-worth:

> You know, I go day to day by eating safe foods that I know can get me through the day. When something throws that off, it really affects the eating disorder. I need to have, like two or three days to plan how I want to handle situations at home.

She took control over the specific foods she ate or didn't eat, and this then allowed her to feel comfortable with herself and how she felt about her body. She needed to have a set routine and plan in order to get through each day, which helped her manage her body satisfaction and self-esteem.

However, there is also empirical evidence showing there may be no relationship between personal control and eating disorders (Garner, Garfinkel, Stancer, Modolfsky,

1976; King, 1989; Stolberg & Devalve, 1991; Toner, Garfinkel, & Garner, 1986). Such evidence conflicts with the current theme found in this study.

Theme #2

Eating behaviors lead to a negative self-perception

Research has indicated how individuals with eating disorders often experience feelings of being insufficiently qualified, competent, or able to fit the demands of life (Vitousek & Hollon, 1990). They also spent time worrying about negative self-evaluations (Sassaroli et al., 2005). Jacobi (2000) connected low self-esteem to negative self-concept and stated that patients with anorexia and bulimia exhibit lower self-esteem and a more negative self-concept than healthier control groups. This was shown in the current study when the athlete expressed her feelings of worthlessness and negative self-evaluation:

> I seem to not ever think that I'm ever good enough for anything. I'm never good enough for myself. I judge myself way too much. I'm really hard on myself. I feel like I'm useless because I can't function throughout the day like a normal person can. It's really hard for me to accept positive feedback from people because I can't believe it myself.
>
> I notice my self-esteem is a problem, but right now I don't feel like I can get out of the fact that I think I'm worthless sometimes. There's always an underlying factor that I think I am a waste of space. When I feel like that...I revert back to my eating disorder. I ignore people. I get angry with people. I don't really think I can handle the way I feel about myself very well.

In addition, a connection between peer teasing and development of body dissatisfaction in women has been explored. Stice (1998) explained that social reinforcement, which includes the comments or actions of others (e.g., criticism regarding weight) promotes a thin ideal and body dissatisfaction in women. This could result in eating disorder behaviors or contribute to current disorders. The athlete in the current study explained how teasing from others, about her weight, caused her to experience a higher body

dissatisfaction and lower self-esteem. She also explored how much of her negative self-perception was based on how she viewed herself based on others opinions:

> People would [say] that I am very angry, a lot. I'm defensive. I get nervous a lot. Being tired, agitated, angry, defensive – all those characteristics describe my personality. I ignore people. I get angry with people.

Furthermore, Buchholz and White (1996) found that girls who viewed themselves "in the eyes of others" had significantly lower appearance-esteem. More specific, bulimics often experience great social anxiety, poor social relationships, and a strong need for social approval (Becker, Bell, & Billington, 1987; Gross & Rosen, 1988; Striegel-Moore et al., 1986b). Lieberman, Gauvin, Bukowski, and White (2001) concluded that girls that viewed themselves in the eyes of others relied on the opinions of their peers for their own self-worth, and were more likely to conform to others expectations in order to feel accepted. Being thin is an expectation among many young women, and therefore girls who want to follow this expectation often experience higher body dissatisfaction and take part in unhealthy eating patterns (Lieberman et al., 2001).

Another factor in the development of a negative self-perception with the athlete in this study was constant comparisons to peers, and this directly reflected how she felt about her body. In previous research it was found that college-age women frequently compared their weight status to that of their peers and experienced body dissatisfaction when comparing with slim peers (Krones, Stice, Batres, Orjada, 2005; Lin & Kulik, 2002). Jansen, Nederkoorn, and Mulkens (2005) discovered that women with eating disorder symptoms often scan their environments and focus solely on the most beautiful bodies, rather than the bodies with less desirable features. More specific, they focused on the beautiful body parts versus the ugly body parts. They then used these comparisons

against their own bodies, resulting in body dissatisfaction. This was evident in the current study with this athlete as she compared herself to other females at school:

> I was in class with all the cheerleaders and I really admired their body shape. They always ate snacks and I would just sit there and want to do that. I wanted to look slim for everybody else. Since I've had an eating disorder, I walk into a room and automatically compare myself to other girls. Her thighs don't touch – my thighs do. My butt sticks out – her butt doesn't. My arms aren't skinnier than her arms.

These comparisons caused this athlete to create a dislike in her physical appearance and constantly judge herself based on these comparisons.

Theme #3

Conflict with family developed due to eating behaviors

Thompson and Sherman (1993a) suggested that parents who have children with eating disorders are preoccupied with their own weight and eating habits, emphasize physical appearance, rely on external factors to measure their self-esteem and personal success, have a history of alcoholism or depression, and experience unhealthy child-parent interactions. Striegel-Moore et al. (1986b) found that many parents may subtly allow eating disorder behaviors or unhealthy eating habits. In this study, the athlete expressed how she had major conflict with her parents and brother, and that caused her to feel even worse about herself and her body. In the case of her mother, she didn't want to take part in any of the therapy with her daughter and her mother felt like it was the responsibility of her daughter to deal with her eating disorders. She didn't want any part in the therapy:

> My mom said that an eating disorder was my issue and I had to deal with it. She said she had nothing to do with my eating disorder therefore she shouldn't be in the therapy and discussing my problems. My mom said she doesn't care if I don't eat a lot. She would rather me be anorexic than bulimic, just because of the consequences of bulimia.

These experiences support previous research that some parents may subtly allow eating disorder behaviors and create distance between themselves and their daughters. Research has also stated that bulimics report poorer family adjustment and problems with their parents (Humphrey, 1986; Mitchell, Hatsukami, Eckert & Pyle, 1985; Norman & Herzog, 1983; Sights & Richards, 1984). Furthermore, bulimics' families have been found to be less caring, less cohesive, and to have more conflict and hostility (Calam, Waller, Slade, & Newton, 1990; Johnson & Flach, 1985; Kog, Vertommen, & DeGroote, 1985; Ordman & Kirschenbaum, 1986; Palmer, Oppenheimer, & Marshall, 1988; Pole, Waller, Stewart, & Parkin-Feigenbaum, 1988).

Prior research has also explored the fact that individuals with anorexia typically have families that are closely meshed with one another, that avoid conflict, and are characterized as overly protective and rigid (Minuchin, Rosman, & Baker, 1978). This was not the case with our current study. This athlete described that there was much conflict between her and her family. She also explained that her family was not involved in her eating disorder, therefore stepping back and not taking the role of being overly protective.

Past research exploring conflict in families emphasizes conflict between families due to the fact that these women were taking part in treatment for their bulimia. Much of the conflict may revolve around this treatment factor. This too was apparent in the current study:

> When my brother talks about my eating disorder, it gets me frustrated and I need to talk to my therapist about that. My brother got frustrated with the fact that I was talking to my therapist about them. My brother gets mad and he and I just verbally argue because he is so sick of my eating disorders.

Humphrey (1986, 1987) found that family members of women with eating disorders were less involved with one another and more distant. They were also perceived to be less caring and exhibited more problems with communicating with one another. These characteristics were present in the current study, and caused this athlete to feel worse about her disorder, which resulted in low self-esteem and poor body satisfaction.

Theme #4

Eating behaviors caused for poor performance in sport

Wilmore (1992a) concluded that even though weight loss typically results in enhanced athletic performance, there is a point beyond which continued weight loss will lead to a decline in performance. More specific, it has been found that constant restriction of energy and lack of nutrient intake, combined with excess exercise, can hinder athletic performance greatly (Beals & Manore, 1994; Benardot, Schwartz, Wertzenfield & Heller, 1989; Garner & Rosen, 1991; Perron & Endres, 1985; Tilgner & Schiller, 1989; Wilmore, 1991). Koszewski, Chopak, and Buxton, (1997) found that inadequate intake of nutrients deprived the body of the right amount of carbohydrates needed for a normal metabolism and the energy needed to perform in an event. This is supported by the findings from this current study. In fact, this athlete was aware of her lack of energy and nutrient intake due to her eating disorder behaviors:

> Not eating affects my training big time. I didn't do weights after swim practice because I am so worn out. I get muscle strains a lot easier – I get cramps a lot easier. I get dehydrated and lack nutrients. After not eating and not drinking all day, I go to a 2 hour practice and my foot starts cramping up, so I have to get out of the pool.

This athlete expressed that her loss of energy and lack of muscle made an impact on how she viewed herself and overall performance. She could see that her teammates did not

have this problem, and this was frustrating to her because it affected her performance at practice and in competition:

> I am injured a lot more than my teammates are. The other girls, they don't have issues like dehydration and lack of nutrients when they swim.

In comparison, Wilmore (1992b) stated that within a given sport, the leaner the athlete, the better they perform. This claim is supported by research on distance runners (Bioleau & Lohman, 1977; Cureton & Sparling, 1980; Pate, Barnes, & Miller, 1985).

Although the athlete in this study was aware of how her eating disorder behaviors directly affected her performance in competition, she was not willing to quit her behaviors or change her routine surrounding her eating disorder behaviors:

> There have been times when we've had a swim meet on Saturday and I've binged and purged on Friday night. The actual performance of that was not very good. I was a lot slower. My body just felt really heavy in the water. I had no energy to do anything. I got out early a couple of times because my body had nothing to go off of.

Pavlidou and Doganis (2007) stated that a similarity between athletes and non-athlete anorexics is that they never quit, even when they experience great pain. Many athletes still compete if they are ill, tired, or injured; and many anorexics deny their pain and weakness due to their eating disorder behaviors. The athlete in this study took part in competition, even though the affects of her eating disorder were present. The affects of her eating disorders on her performance lead this athlete to feel worse about herself and her performance, and negatively affected her body satisfaction.

Theme #5

Eating behaviors generated self-isolation causing self-loathing and internal discord

Pipher (1995) reported that most women who suffer from bulimia are isolated and withdraw from their communities and have difficulty having fun with others. Much of the

isolation of anorexics and bulimics is due to their focus on their disorder. Individuals with eating disorders are consumed with their disorder, and as a result it becomes a priority in their life (Button, 2005). This was also expressed by the athlete in this study:

> I feel like I'm just so self-absorbed with the eating disorder and how it consumes my day. I don't notice that other people are trying to be friends with me and they just sort of give up.

Button (2005) stated that relationship issues, work life, social life, and even life and death often take a back seat to the bigger issues of weight, body size, food, and eating in patients with anorexia and bulimia. Control over eating and body size eventually lead many women into isolation and unhealthy existences (Button, 2005).

A woman's perception of "how she is different from others" can greatly impact her forming meaningful relationships (Hall & Cohn, 1999; Zraly & Swift, 1990). Women who keep emotions hidden or are not able to identify these negative emotions rarely confide in others when they are upset or feeling stressed (Hall & Cohn, 1999). This too can cause isolation for women (Costin, 1999). In this current study, the athlete discussed how she returned from winter break and became frustrated with her teammates and the fact that she had to live with them. Still, she kept these emotions inside and distanced herself from her teammates even more:

> After break and coming back to school, I shied away from my teammates. I didn't really do much with them. I didn't want to talk with them. It put me in a depressive episode. I don't want to talk with them. I don't want to be around my teammates anymore.

Finally, there seems to be a link between women with anorexia and bulimia, isolation, self-esteem, and feelings about body weight. Women often feel they will not be accepted by others if they are not at their ideal weight, which can cause for even more isolation

(Hall & Cohn, 1999; Zerbe, 1995). In this study, the athlete showed how her self-esteem was affected by the fact that she was isolated from others:

> I still feel like an outsider. I don't notice that other people are trying to be friends with me and then they give up. The eating disorder behaviors really make me feel like an outsider because I am so consumed with them. Being an outsider makes me look at myself and hate myself even more. I don't have friends because I live by myself. I'm not happy with being an outsider.

She was aware that her eating disorder behaviors were causing her to isolate herself from others, but it still caused her to hate herself, and negatively affected her self-esteem. She was not happy with the fact that she was an outsider and continued to isolate herself from others, but she also admitted that she didn't change her behaviors.

Theme #6

Self-perceived coping strategies enhanced her lifestyle

Coping strategies have been researched among females with body image issues and it has been found that with the proper coping strategies, females are less likely to engage in eating disorder behaviors. In addition, these females often feel more satisfied with their bodies and their self-worth (Hart, Leary, & Rejeski, 1989). Striegel-Moore, Silberstein, Frensch, and Rodin (1989) found that athletic involvement enhanced self-image, feelings of self-worth, and sociability among college students. In fact, research supports exercise as a very effective coping strategy for females with eating disorders (Silberstein et al., 1989). In this study, the athlete also expressed that being involved in sports and performing well caused her to have higher self-esteem and was a positive coping strategy:

> A lot of coping strategies have really come out of therapy. The first coping strategy was swimming or playing sports – being physically active.

> Some days my self-esteem is better than others. What influences high self-esteem is doing well in school. Doing well in sports is a big one. I always get very excited if I'm doing well.

In contrast, other researchers have reported athletic activity to be associated with body dissatisfaction and disturbed body images. It may be that some individuals involved in athletic activity take part in repeated dieting attempts that affect their mood (Smith, 1980).

A comparison to others was found to be an effective coping strategy for the athlete in this study. Comparisons with peers who are "worse off" may cause higher self-esteem in women with eating disorders (Wills, 1981). It might also be suggested that comparisons with overweight or unfit peers could also enhance a woman's body satisfaction (Taylor & Lobel, 1989). In this study, the athlete expressed her ability to get through the day easier when she compared herself with others that were either overweight or unfit in her eyes:

> It helps me cope to remember that other people have other issues too. I go out there and I see other people that are a little bit bigger than me. I think that "she looks fatter than me" so I can be ok for right now. This helps me rationalize it so I can get through the day. In the long run, that strategy for me to realize that I'm not really seeing myself, or comparing myself to other people, helps me day-by-day, hour-by-hour.

In short, this athlete used comparisons to others to keep her self-esteem higher and gain satisfaction about her own body.

Interestingly, Lin and Kulik (2002) found that comparing oneself to a peer produced asymmetrical effects. Women that compared themselves to thin peers experienced decreased body satisfaction, whereas women exposed to overweight peers experienced no enhanced body satisfaction. The athlete in this study experienced

enhanced body satisfaction when she compared herself to a peer who she believed to be heavier than herself.

This athlete also felt better if she "hung out" with people and the feeling of being socially accepted kept her feeling good about herself and her body. Breaking out of her isolation mode allowed her to concentrate less on her eating disorder behaviors:

> Having friends that care about me [influences high self-esteem]. If people invite me to parties I feel a little bit better about myself. If people call me [or] if I get text messages.
>
> I think having things to do triggers a good body satisfaction. Having something to do and eating a little bit less. Having something else to do kind of helps me stay moving. Not concentrating on the idea that my stomach is fat and I'm sitting down, and in 30 minutes I have to eat lunch. Just being out of the house and away from that atmosphere.

Women with bulimia often use the coping strategies of self-blame or escape avoidance to reduce stress, instead of seeking emotional support (Ball & Lee, 2002; Ghaderi & Scott, 2000; Koff & Sangani, 1997). In the case of this current athlete, she used escape from her household as a way to cope with her eating disorders, which in turn likely enhanced her self-esteem and body satisfaction because she was no longer in a negative environment.

Finally, the last important coping strategy that this athlete used was reminding herself about the concept of distortion. This allowed her to keep her self-esteem at a high level and not become dissatisfied with her body:

> I think body image and satisfaction with body image are huge factors in eating disorders, in the fact that it is very distorted. Realizing that body image is a distortion – sometimes it helps but sometimes it doesn't. Being told that throughout the years has played a really huge factor in me getting through the day. Seeing that body image is distorted and reminding me of that routinely during the day really affects how I see myself. Realizing that I'm not seeing what I should be seeing reminds me not to judge myself as much.

Research supporting this coping strategy has focused on taking negative self-beliefs and linking them with positive self-beliefs. This is an example of emotion-focused coping strategies, which are often used by women with eating disorders (Showers & Larson, 1999).

Summary

Research supports the control and planned routines of women with eating disorders as ways to manage self-esteem and body satisfaction (Bruch, 1988; Burger, 1992; Fairburn et al., 1998; Vitousek & Manke, 1994), negative self-perception leading to a negative perception of physical appearance and personality (Jacobi, 2000; Lieberman et al., 2001; Sassaroli et al., 2005; Stice, 1998), conflict with family resulting in low self-esteem and poor body satisfaction (Calam et al., 1990; Humphrey, 1986; Striegel-Moore et al., 1986b; Thompson & Sherman, 1993a), poor performance (i.e., due to eating disorders) creating frustration in athletes (Beals & Manore, 1994; Garner & Rosen, 1991; Koszewski et al., 1997; Pavlidou & Doganis, 2007), isolation in women with eating disorders generating self-loathing and internal discord (Button, 2005; Hall & Cohn, 1999; Pipher, 1995; Zerbe, 1995), and perceived coping strategies enhancing women's lifestyles (Ball & Lee, 2002; Ghaderi & Scott, 2000; Koff & Sangani, 1997; Showers & Larson, 1999).

The purpose of this study was to explore the body satisfaction and self-esteem in a female collegiate athlete with eating disorders. More specific, the findings provide an answer to the question, "What is the impact of eating disorder behaviors on a Division III female collegiate athlete's body satisfaction and self-esteem?"

Results from this study concluded that a female athlete's body satisfaction and self-esteem are impacted in a variety of ways by the athlete's eating disorder behaviors. First, a sense of control and a planned routine helped her manage her self-worth (Fairburn et al., 1998); however there is no research that directly supports the connection between body satisfaction and control. Second, her negative self-perception negatively impacted her physical appearance and her personality (Buchholz & White, 1996; Jacobi, 2000; Stice, 1998). Her eating disorder behaviors created this negative self-perception, which in turn lowered her self-esteem and created body dissatisfaction. Third, a lack of support and communication from the family, and conflict due to distance among family members, caused low self-esteem and poor body satisfaction (Calam et al., 1990; Humphrey, 1986, 1987; Kog et al., 1985; Palmer et al., 1988). However, past research has also suggested that avoiding conflict and having constant communication result in lower self-esteem and greater body dissatisfaction (Cachelin, Striegel-Moore, & Paget, 1997; Minuchin, 1978; Young, Clopton, & Bleckley, 2004). These previous findings conflict with the results found in the current study. Fourth, eating behaviors that caused this athlete to lose weight directly affected her performance (Beals & Manore, 1994; Garner & Rosen, 1991; Koszewski et al., 1997). More specific, her performance was poor and this created even more frustration. Opposing research indicates that the leaner the athlete, the better they perform (Boileau & Lohman, 1977; Cureton & Sparling, 1980; Pate, Barnes, & Miller, 1985). Fifth, isolation generated a negative mindset and therefore the athlete developed self-loathing and internal discord (Costin, 1999; Hall & Cohn, 1999; Zraly & Swift, 1990). Finally, perceived coping strategies enhanced this athlete's overall lifestyle (Lin & Kulik, 2002; Taylor & Lobel, 1989). Exercise was found to be a main way to cope with

her eating disorders and research has supported this as an effective way to improve self-esteem and body satisfaction (Rodin, 1993). In short, she found athletic involvement to be an effective coping strategy.

Chapter 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to identify the impact of eating disorder behaviors on a female collegiate athlete's body satisfaction and self-esteem. This chapter includes a summary, the conclusions, and several recommendations for future research.

Summary

The current study identified six themes regarding factors impacting eating disorder behaviors on a female collegiate athlete's body satisfaction and self-esteem. A qualitative case study was followed, and initial and follow-up interviews were conducted with the athlete. Data analyses revealed the following six themes: 1) Eating behaviors were a way to control her life; 2) Eating behaviors lead to a negative self-perception; 3) Conflict with family developed due to eating behaviors; 4) Eating behaviors caused for poor performance in sport; 5) Eating behaviors generated self-isolation causing self-loathing and internal discord; and 6) Self-perceived coping strategies enhanced her lifestyle. These themes outlined the experiences of one athlete and the impact of her eating disorder behaviors on her body satisfaction and self-esteem.

These results provide a better understanding of eating disorder behaviors and the potential impact of such disorders on female collegiate athletes' body satisfaction and self-esteem. In addition, this is one of only a few qualitative studies assessing eating disorder behaviors and personality factors. Combined, it should expand the existing knowledge about body satisfaction and self-esteem in female collegiate athletes.

Conclusions

Similar to the findings of Fairburn et al. (1998) and Vitousek and Ewald (1993), results indicated that when this athlete took control over her eating, she was able to directly enhance her self-worth, which allowed her to better manage her self-esteem and how she felt about her body. Despite some research showing a limited relationship between personal control and eating disorders (Garner et al., 1976; King, 1989), the current study supported such a relationship. The literature also supported a connection between negative self-concept and low self-esteem (Jacobi, 2000). In the current study, similar results were found, as well as support for social reinforcement leading to a negative self-concept and poor body satisfaction (Stice, 1998). In fact, current results indicated that the athlete's family exhibited conflict with her and became less caring and as a family, less cohesive. This caused for low self-esteem and poor body satisfaction with this athlete, and supported previous research about a connection between family conflict and eating disorders (Calam et al., 1990; Kog et al., 1985; Palmer et al., 1988; Pole et al., 1988).

With chronic eating disorder behaviors, the sport performance of the athlete in this current study decreased. As a result, she showed instances of lowered self-esteem due to her poor sport performances. Research has supported the relationship between eating behaviors and athletic performance, and how chronic, negative eating behaviors can lead to poor athletic performance (Beals & Manore, 1994; Benardot at al., 1989; Garner & Rosen, 1991; Wilmore, 1991). Results also indicated eating disorder behaviors caused this athlete to become isolated. This isolation led to dislike of herself and low-self esteem. This finding was similar to previous research explaining how women who are at

a less than ideal weight, often feel less accepted by others and as a result, often isolate themselves, causing body dissatisfaction and low self-esteem (Button, 2005; Hall & Cohn, 1999; Zerbe, 1995).

Finally, the current results showed that coping strategies used by the athlete improved her body satisfaction and self-esteem, and helped her to better manage her unhealthy eating behaviors. More specific, the athlete in the current study used athletic involvement to help her keep a positive mindset about her body, as well as improve her self-esteem. Previous research has depicted athletic involvement as an effective coping strategy for athletes with eating disorders (Rodin, 1989). The current athlete also used peer comparisons in an attempt to better cope with her eating disorder behaviors. It has been suggested that social comparisons are effective coping strategies to enhance body satisfaction and self-esteem (Taylor & Lobel, 1989; Wills, 1981).

Future Recommendations

While the current study has provided pertinent information for athletes, researchers, and the athletic community, additional research is still needed. The first recommendation for future research is to replicate this current study using the same methodology on a larger scale, using more subjects. This would allow for more qualitative data to either support or refute the current findings. Second, it would be beneficial to examine the impact of each separate eating disorder. In this current study, the athlete experienced two different eating disorders. A focus on the different treatment processes for each disorder might allow for more in-depth and focused results. Third, it would seem beneficial to focus on specific sports. The athlete in the current study participated in both swimming and lacrosse and her experiences in both sports likely

differed from one another. A closer examination of these unique sport experiences might be important. In addition, assessing the differences between male and female athletes may provide more information for the prevention and treatment programs across genders. Furthermore, it would be beneficial to interview coaches, teammates, and parents who are a significant part of the athlete's life, as well as counselors and others involved in the treatment process. Finally, examining body satisfaction and self-esteem before and after counseling could prove beneficial in terms of better understanding treatment protocols and ways to enhance satisfaction and esteem. In sum, more research is needed to better understand the impact of eating disorder behaviors on body satisfaction and self-esteem.

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APPENDIX A

Biographical Information

Athlete:	**Athlete's pseudonym that is designated to them at the beginning of the interview**
Date:	**Date of interview**
Age:	**Athlete's age**
Weight:	**Athlete's weight**
Height:	**Athlete's height**
Race:	**Athlete's race**
Sport:	**All sports that the athlete is currently participating in at Ithaca College**
Duration of Sport:	**Length of time that the athlete has been on each team at Ithaca College**
Age of Sport Participation:	**The age that the athlete began to play each sport**

Athlete:	001
Date:	12/9/09
Age:	22
Weight:	119 lbs
Height:	5'3"
Race:	White/Caucasian
Sport:	Swimming; Lacrosse
Duration of Sport:	Swimming: Since September 2009 Lacrosse: Since September 2009
Age of Sport Participation:	Swimming: 8 years old; Lacrosse: 12 years old

APPENDIX B

Informed Consent Form

Body Satisfaction and Self Esteem: A Qualitative Case Study of a Female Collegiate Athlete with Eating Disorders.

1. **Purpose of the Study**

The purpose of this study is to explore the body satisfaction and self-esteem of a female collegiate athlete with eating disorders.

2. **Benefits of the Study**

By exploring body satisfaction and self-esteem of a female student-athlete with eating disorders, the relationship between body satisfaction and self-esteem will be examined. Few qualitative studies exist that explore body satisfaction and self-esteem as factors affected by eating disorders. Results may help educate student-athletes, as well as coaches, parents, and peers, as to better ways to help those with an eating disorder.

Possible benefits to the field include:

- A better understanding of how an eating disorder can affect the body satisfaction and self-esteem of female student-athletes.
- An opportunity to evaluate eating disorders from the perspective of female student-athletes.
- The creation of an interview guide, in the semi-structured format, that can be used as a tool to collect qualitative data relevant to eating disorders in the athletic community.
- Information that may aid in the development of future eating disorder prevention strategies for the athletic community as well as treatment programs.

Possible benefits to the participant include:

- Information that may help student-athletes who are dealing with an eating disorder.
- An opportunity to talk about body satisfaction and self-esteem associated with being a student-athlete with an eating disorder.

Initials _____

3. **What You Will Be Asked to Do**

The initial interview will be approximately 60-90 minutes in length and will follow a semi-structured interview guide that consists of questions about your eating disorder, body satisfaction and self-esteem. The follow-up interview will be approximately 20-30 minutes and will explore areas of the first interview in more detail. The primary investigator will conduct all interviews. Each interview will be tape recorded and transcribed verbatim. If you have any questions before, during, or after the interview, please do not hesitate to ask the interviewer. The principle investigator will send a copy of the final interview transcripts to you for your review. At this point, you can make any changes that you deem necessary. This process will take approximately 30 minutes and will be voluntary. If desired, at the conclusion of the study, you may pick up a copy of your final transcribed interview.

4. **Risks**

Potential risks for you in this study are minimal. However, for some people, talking about eating disorders can be difficult. To minimize this risk, you will be allowed to discontinue the interview at any time. Also, referral information will be provided to you at the end of each interview listing the counseling services available on campus and in the Ithaca community.

5. **Responsibility for Injury Statement**

If you request further counseling after your interview, a referral will be made for you to the Ithaca College Counseling Center. In addition, a list of contacts for counseling services in the community will be provided to you after your interview is complete.

If you suffer an injury that requires any treatment or hospitalization as a direct result of participation in this study, the cost for such care will be charged to you. If you have insurance, you may bill your insurance company. You will be responsible to pay all costs not covered by your insurance. Ithaca College will not pay for any care, lost wages, or provide other financial compensation.

6. **Withdrawal from the Study**

You may discontinue your participation at any point during the interview or if the material is too difficult for you to answer. If you choose to discontinue the interview, there will be no negative consequences for your actions. You will not need to provide an explanation. All information that is recorded up to that point will be destroyed. If you are interested in more counseling after the interview, I will provide a list of campus and Ithaca community contacts.

Initials _____

7. **How the Data will be Maintained in Confidence**

All interviews will be held in a private location which will be decided upon by the researcher and each participant. A private room in the Center for Health Sciences (CHS) will be reserved as an option for each interview. The participant will be given the opportunity to choose a pseudonym which will be used throughout the study and in any future publication or presentation of the results. If you do not choose a pseudonym, one will be provided for you. All interviews will be tape-recorded and transcribed. All tapes and transcripts will be kept in a locked cabinet in Dr. Greg Shelley's office (CHS 319). Only the primary investigator and her faculty advisors will have access to the tapes and transcripts. All tapes will be destroyed once they are transcribed.

8. **If You Would Like More Information about the Study**

You may contact the researchers to get more information about the study or the results. Shira Pope can be contacted at **(503) 957-3796** or **spope1@ithaca.edu**. Dr. Greg Shelley can be contacted at **(607) 274-1275** or **gshelley@ithaca.edu**. Dr. Jeff Ives can be contacted at **(607) 274-1751** or **jives@ithaca.edu**.

I have read the above and I understand its contents. I agree to participate in the study. I acknowledge that I am at least 18 years old.

_____

Print or Type Name

_____ _____

Signature Date

I give my permission to be audiotaped throughout the entire interview.

_____ _____

Signature Date

I, _____ wish to participate in the following study:
Print Name

"Body Satisfaction and Self Esteem: A Qualitative Case Study of a Female Collegiate Athlete with Eating Disorders."

_____ _____

Participant's Signature *Date*

APPENDIX C

Referral Information

Ithaca College Counseling Center:

Location: Lower level of the Hammond Health Center which is accessible through a private entrance near the U parking lot.

Hours:
Regular business hours – 8:30 a.m. to 4:30 p.m. (Monday-Friday) – **(607) 274-3136**
After regular business hours until 10:30 p.m. – **(607) 274-3177**

24 Hour Campus Resources

24-hour emergency assistance is also available through Cayuga Medical Center of Ithaca, Emergency Department, at **(607) 274-4411**.

24-hour telephone crisis counseling is available through Suicide Prevention and Crisis Service, at **(607) 272-1616**.

APPENDIX D

Recruitment Statement

Hello! My name is Shira Pope and I am a Master's student in the Department of Exercise and Sport Sciences. I am here to recruit a subject for my thesis concerning the body satisfaction and self-esteem of a female student-athlete with eating disorders. This topic is very sensitive and personal, and I want to assure you that if you do choose to participate in this study, all of the information you provide will remain completely confidential. In order to participate in this study, you must be at least 18 years of age, a female student-athlete at Ithaca College, and have received treatment for a clinical eating disorder within the last 12 months.

Participation in this study is voluntary and you will be asked to participate in a 60-90 minute initial interview where I will ask you a series of questions regarding your eating disorder, your body satisfaction, your self-esteem, and how your body satisfaction and self-esteem are affected by your eating disorder behaviors. After your interview, I will contact you to set up a follow-up interview which will last 20-30 minutes. In this interview, you will be asked a series of questions that will explore areas of the first interview in more detail. I will send you a copy of the final transcripts. You will have the opportunity to read both transcripts to check for accuracy and to make any changes you deem necessary.

If you are interested in volunteering, you can contact me by email (**spope1@ithaca.edu**) or phone **(503) 957-3796**. It is not necessary to express your interest in the study now, but if you are interested in participating please contact me within the next three days.

Thank you for your time. Please let me know if there are any questions that you may have regarding the study and I would be happy to answer them.

Sincerely,

Shira Pope
Phone: (503) 957-3796
Email: spope1@ithaca.edu

NOTE: I will be the only person to receive any emails or calls from the above contact information.

APPENDIX E

Semi-Structured Interview Guide (Initial Interview)

Question Set I: Demographic Information

Contact Information

Today's Date: __/__/__

Name: _____

Address: _____

_____

Phone Number: _____

Email Address: _____

Personal Information

Birth Date: __/__/__

Weight: _____ lbs

Height: ___ft ___in

Race: _____

Athletic Information

What sport(s) are you currently participating in at Ithaca College?

1. _____ 2. _____ 3. _____

How long have you been a member of this (these) team(s) at Ithaca College?

1. _____ 2. _____ 3. _____

At what age did you start participating in sports? _____

Question Set II: Eating Disorder Information

1. *What type of eating disorder have you been clinically diagnosed with? Who diagnosed you?*
    a. *When did you first become concerned with your eating disorder behaviors?*

b. *Were you able to pinpoint any specific factors that may have influenced your eating disorder behaviors?*

c. *When did you first receive treatment for your eating disorder behaviors?*

d. *How long did you (have you) receive(d) treatment for your eating disorder behaviors?*

e. *Who has been a part of the treatment process since you have been diagnosed with your eating disorder?*

f. *How involved in athletics were you when you were diagnosed with your eating disorder?*

2. *What type of treatment/counseling have you received for your eating disorder behaviors?*

    a. *How has this treatment affected you/your eating disorder behaviors?*

        i. *Do you feel that your treatment has been effective? Explain*

3. *Describe a typical day with your eating disorder behaviors?*

    a. *Overall, how have these behaviors affected you?*

4. *From as far back as you can remember – tell me about the development of your eating disorder behaviors.*

5. *How would you best describe your "personality" as you continue to live with your eating disorder?*

Question Set III: Body Satisfaction

1. *Tell me what you think the term "body satisfaction" means.*

2. *What factors and relationships most impact your physical appearance?*

3. *How do you feel about your physical appearance?*

4. *Tell me about how you deal with your perception of your body?*

5. *For you, what factors most influence a positive perception of your body? What about a negative perception of your body?*

6. *How satisfied are you with your body? Explain.*

7. *How was your body satisfaction influenced by your eating disorder behaviors?*

    a. *Since you've started treatment, has your body satisfaction changed? Explain.*

Question Set IV: Self-Esteem

1. *Tell me what you think the term "self-esteem" means.*
2. *What factors and relationships most impact your self-esteem?*
3. *How do you feel about your self-esteem?*
4. *Tell me about how you deal with your self-esteem?*
5. *For you, what factors most influence high self-esteem? What about low self-esteem?*
6. *Do you feel that you have high self-esteem or low self-esteem? Explain.*
7. *How was your self-esteem influenced by your eating disorder behaviors?*

    a. *Since you've started treatment, has your self-esteem changed? Explain.*

Question Set V: Body Satisfaction and Self-Esteem

1. *How does your physical appearance affect how you feel about yourself (i.e., your self-esteem)?*
2. *Is there anything else about body satisfaction or self-esteem that you would like to share (that you have not shared to this point)?*
3. *Is there anything else about your eating disorder behaviors that you would like to share (that you have not shared at this point)?*

APPENDIX F

Semi-Structured Interview Guide (Follow-Up Interview)

Question Set I: Teammate Relationships

1. *How do your relationships with your teammates affect your eating disorder behaviors?*

2. *How do your relationships with your teammates affect your body satisfaction?*

3. *How do your relationships with your teammates affect your self-esteem?*

Question Set II: College Status

As you mentioned in the first interview, some factors that influenced your eating disorder behaviors were "not being a part of the in-crowd and feeling like an outsider."

1. *Now that you have been in college, what are your views of this and how has it affected your eating disorder behaviors?*

2. *How have these views affected your body satisfaction?*

3. *How have these views affected your self-esteem?*

Question Set III: Family Relationships

1. *How do your relationships with your family affect your eating disorder behaviors?*

2. *How do your relationships with your family affect your body satisfaction?*

3. *How do your relationships with your family affect your self-esteem?*

Question Set IV: Sport Performance

1. *How has your eating disorder behaviors affected your performance on the swim team and lacrosse team, both in practice and competition?*

Question Set V: Distortion

As you mentioned in your first interview, it can be important to realize how your body image is distorted when you have an eating disorder.

1. *What strategies or methods do you use to remind yourself or help yourself cope with this idea of distortion? Explain if they are helpful or not.*

Question Set VI: Triggering Situations at Home

1. *Explain what situations at home might trigger your eating disorder behaviors?*

2. *Explain what situations at home might trigger a low self-esteem? High self-esteem?*

3. *Explain what situations at home might trigger a good body satisfaction? Poor body satisfaction?*

APPENDIX G

Data Analyses for All Higher-Order Themes

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS3: Renfrew had 3 large meals and I think I felt the need to throw up because it was overwhelming for me.	MU2: Eating disorder behaviors	LOT 4: Eating disorder behaviors of anorexia and bulimia	***HOT 1: Eating behaviors were a way to control her life***
SS76: I think the fact that I became bulimic has really affected me much more so than just being anorexic.			
SS78: There's been times when I am so frustrated that I'll leave school and skip class because I need to go binge and purge because I haven't eaten anything and I'm starving.	MU16: Control		
SS45: My therapist and I worked on what's making me revert to my controlling tendencies of controlling food.		LOT 10: Has controlling tendencies over situations that revolve around food	
SS191: If I'm upset and I get a bad grade, it influences me because I can't control the fact that I got a bad grade. Ya I can control studying, but you know, after the fact that I didn't do as well as I had hoped.	MU20: Feeling overwhelmed		
SS192: I revert back to the only control I have, which is, I can control my eating.			
SS74: Sometimes if I'm really overwhelmed, I will revert back to the bulimic tendencies and I will go buy food and I will binge and purge on it.	MU34: Affects of school	LOT 12: Aspects of school affect her eating disorder behaviors	
SS80: Missing class is obviously a huge thing and that affects my eating disorder.			
SS207: I get very nervous when I have to go home because I don't have my set routine. I think routine is a huge thing when you have an eating disorder.	MU37: Thoughts of planning/routine		
SS209: I need to have like 2 or 3 days to plan how I want to handle situations at home.			

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS1: I was in health class and I was in this class with like all the cheerleaders and stuff like that and I really admired their body shape.	MU5: Being teased for physical appearance	LOT 3: Comparing herself to others	***HOT 2: Eating behaviors lead to a negative self-perception***
SS5: I think varsity swim team affected me in the standpoint because I wanted to look slim for everybody else.	MU31: Judging physical appearance		
SS71: I don't want people to see me eat.	MU25: Personality		
SS73: I think that people are judging me because I am eating.	MU1: Focus on others	LOT 5: Being teased for her weight and the clothes that she wore	
SS82:I was, you know, decent enough to make the college team, but there's a clear difference between me and the girls that don't have an eating disorder.	MU19: Fear of people watching her eat		
SS86: I am injured a lot more than my teammates are.	MU6: Focus on weight		
SS6: I was a little overweight and one of the girls did not want to be my friend.	MU4: Relationship with friends	LOT 7: Negative perception of her physical appearance	
SS7: People made fun of me for the clothes that I wore they would tease behind my back.	MU21: Fear of being judged		
SS11: People said if you're fat, you're not my friend.	MU14: Focus on food		
SS9: I felt that everything was based about my weight.	MU13: Affects of slums	LOT 9: Negative feelings of herself describe her personality as she continues to live with her eating disorder behaviors.	
SS35: I was so concerned about the food and not wanting to eat food.	MU33: Low self-esteem		
SS112: I quit marching band because I thought that by standing up all the time and moving around is going to make my butt too big.	MU23: Comparison with teammates		
SS131: Clothes that don't fit affect a negative perception of my body.	MU27: Focus on body shape	LOT 11: Her definitions of elf-esteem and body satisfaction	
SS164: I judge myself way too much.	MU15: Depression		
SS161: I seem to not ever think I am good enough for anything.	MU28: Focus on clothes		
SS186: Having a bad body image day affects my self-esteem.	MU30: Negative body image		

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS52: My mom said that an eating disorder was my issue and I had to deal with it.	MU7: Relationship with mother	LOT 1: Confliction with her family negatively affects her eating disorder behaviors	***HOT 3: Conflict with family developed due to eating behaviors***
SS53: My mom said she had nothing to do with my eating disorders therefore she shouldn't be in the therapy and discussing my problems.			
SS63: My dad is very religious and says, God will take care of it; I don't need to go to therapy.			
SS64: There's a lot of confliction with my family and me.	MU8: Relationship with father		
SS56: My brother always says that I can just change whenever I want to.			
SS57: My brother has no empathy for me.			
SS58: My brother didn't understand what I was going through, so he's like "Just eat. What's the problem?"	MU9: Relationship with brother		
SS95: When I was at my friends house, I would tell them I had dinner at home, so I wouldn't have to eat so I wouldn't have to be around anybody that would make me eat.			
SS256: It just scares me because I want to be normal, but I really can't be normal in reality because I'm just like, you know, hiding everything from them.	MU24: Lying to family/friends		
SS43: My family refused to do family therapy.			
SS44: My therapist and I worked on, you know, what's going on in my family household, that's making me so upset.			
SS62: My family said, "It's not our problem – it's your problem."	MU39: Relationship with family		
SS206: I didn't want to go home because I didn't want to have to deal with eating around the family.			
SS210: I try and think of where I can go, who I can see to get me out of the house.			

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS19: I was on the swim team when diagnosed with the eating disorders.	MU10: Performance in sports	LOT 8: Poor performance on her sport teams was accredited to her eating disorder behaviors	***HOT 4: Eating behaviors caused for poor performance in sport***
SS20: I was frustrated that I wasn't doing very well on swim team.			
SS25: I went back into swimming and then I kind of down-falled after the season again.			
SS26: Every time I was admitted in-patient, I was always participating in athletics.			
SS81: Not eating affects my training big time.			
SS85: I don't do weights after swim practice because I am worn out.			
SS87: I get muscle strains a lot easier I get cramps a lot easier.			
SS88: I think that, you know, I get dehydration obviously, lack of nutrients.			
SS89: If you're not eating and you're not drinking all day and then you go to a two hour practice, you know, my foot starts cramping up so I have to get out or something like that.			
SS212: I would have to say after the second half of the swim season, my eating disorder behaviors kind of got a little worse.			
SS218: I usually eat like an hour before practice and it really kind of hindered my performance those couple of weeks, just because of the way I was eating around my teammates.			
SS243: There's been times when we've had a swim meet on Saturday and I've binged and purged on Friday night. I see that really wasn't the smartest thing for an athlete to do.			
SS244: The actual performance of that really was not very good. I was a lot slower.			

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS4: Being a little overweight and not being part of the in-crowd – people teasing me when I was younger about that.	MU3: Being an outsider/loner	LOT 2: Distancing her self from others because she is consumed with her eating disorders	***HOT 5: Eating behaviors generated self-isolation causing self-loathing and internal discord***
SS8: It felt like I was just an outsider and I was the only one in the class that was like that.			
SS111: Like during my offseason, I always try to workout by myself.			
SS172: I think when I feel like that, you know, just being by myself. You know, not being around other people.			
SS213: I live by myself. I don't really, you know, like to live with people. So it was difficult in the fact that I got housed with the teammates.	MU22: Relationship with teammates		
SS221: I would say after break and coming back to school, I kind of just shied away from my teammates. I didn't really do much with them. I didn't want to talk with them.			
SS224: I still feel like an outsider.			
SS225: I feel like I'm just so self-absorbed with the eating disorder and what it, like, consumed my day with, that I don't notice that other people are trying to be friends with me, and then they just sort of give up.			
SS227: I think it's a lot of my perception, but the eating disorder behaviors really make me feel like an outsider just because I am so consumed with them.	MU38: Focus on self		
SS228: Being an outsider makes me look at myself and hate myself even more. Just nee to not eat or binge and purge.			
SS229: I dislike it even more just because I don't have friends because I live by myself, even though I know, I have to think that I do this to myself.			

Significant Statements	Meaning Units	Lower-Order Themes	Higher-Order Themes
SS69: I don't think I would be here at Ithaca today, if it wasn't for the therapist or the teachers that have helped council me.	MU11: Relationship with teachers	LOT 6: Coping strategies to help with her eating disorder behaviors	***HOT 6: Self-perceived coping strategies enhanced her lifestyle***
SS29: I don't think that group therapy really works because they are always saying that you can't talk about trigger issues.			
SS31: I actually found like just 1-on-1 therapy was more beneficial.	MU12: Treatment process		
SS40: Treatment has given me insight to myself.			
SS41: I have learned a lot of different coping strategies.			
SS46: A lot of coping strategies have really come out of therapy.	MU17: Coping strategies	LOT 13: High self-esteem occurs when she does well in school, sports, and in her social life	
SS42: Coping strategies helped me try and communicated with my family better.			
SS47: The first coping strategy my therapist also would revert to was swimming or playing sports or being physically active.	MU18: Relationship with therapists		
SS49: Coping strategies cam as like writing in a journal, um coloring.	MU36: Distortion		
SS50: I found that playing cards really helps as a coping strategy.			
SS204: I think that the fact trying to realize that body image is a distortion, sometimes it helps, but sometimes it doesn't. Being told that throughout the years, I think it's played a huge factor in me getting through the day.	MU35: High self-esteem	LOT 14: High body satisfaction occurs when she has something to do and she is able to eat less	
SS251: It helps me cope with some things just because, you know, others people have other issues too. When I compare myself to myself in the mirror, you know, and then I'm just like oh this is so frustrating. I go out there and I see other people that are a little bit bigger.	MU29: Positive body image		